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FINANCIAL TIMES

No. 27,554

Tuesday May 9 1978

**15p

BEARINGS FROM POLAND

FLT

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NEWS SUMMARY

GENERAL

Norfolk slick inquiries ordered

Hundreds of tons of oil were being washed on to Norfolk beaches last night as anti-pollution vessels continued to spray dispersants on to the slick coming from the Greek tanker *Ellini V*.

The French and Greek Governments have ordered inquiries into the collision between the tanker and the French merchant vessel *Roseline*.

The tanker was carrying 18,500 tons of heavy fuel oil when it was struck in two collisions with the *Roseline*. The section of the tanker, containing about 75 per cent. of the oil, has been towed to Holland. Most of the pollution is coming from the forward section which was carrying about 4,000 tons of oil. About 1,000 tons have escaped so far. Back Page

Namibia talks

SWAPO leaders refused to take part in a new round of UN discussions on the Namibia settlement plan. SWAPO announced an hour before the talks were due to resume that its negotiators had been recalled to Lusaka. A statement said that the decision was taken because of South Africa's "air and ground military invasion" of Angola. Back Page

Propaganda row

Alleged clandestine propaganda activities are expected to provoke a major row in the South African Parliament today. Dr. Connie Mulder, Information Minister, will have to defend the activities of his department following a disclosure by Dr. Ezechiel Rhodius, Information Secretary, that he has operated a fund for "informational operations" without Parliamentary approval. Page 4

Coalition threat

Israel's Democratic Movement for Change is threatened with a split over demands that it withdraws from Mr. Begin's coalition Government. Deputy Premier Yigael Yadin, the DMC leader, has said he will fight those calling for his resignation because of his support for the Government's hard-line foreign policy. Page 3

Windscale report

The Government has formally accepted all the recommendations of the Parkes report on Windscale in preparation for Monday's debate on its special development order authorising the £600m. nuclear fuel project. Page 8

Seychelles 'plot'

Some members of the Kenyan Government had been involved in a plot to invade the Seychelles, Mr. Ogilvy Berkeley, Seychelles Interior Minister, alleged. He claimed that the invasion was to have been carried out last week by mercenaries sailing from Kenya and Somalia. Page 3

Volcano risk

Red hot lava poured down from the crater of Mount Pinatubo in the Philippines. Thousands of villagers are ready to evacuate if church bells signal a major eruption. Page 3

Briefly...

Newsagents federation asked the Government to outlaw unofficial action which disrupts newspaper production or distribution. Page 9

Three white men were remanded in custody after being charged with attempted murder in Wolverhampton of a group of West Indians.

The Provisional IRA warned that it would continue its terrorist activities for another ten years, if necessary, until Britain withdraws from Northern Ireland.

Malaysia's Information Minister has banned tight pants and other "indecent clothes" in television shows by local artists.

BUSINESS

Gilts and equities drift; £ lower

● **EQUITIES** drifted, with the FT 30-Share Index, up 1.9 at 430.1, a 2.5 per cent. rise in the Oils sector left the All-Share Index up 0.3 per cent. at 217.03.

● **GILTS** were easier with losses of 1 in longs. Government Securities Index slipped 0.20 to 71.43.

● **STERLING** lost 95 points to \$1.8180 and its trade-weighted index declined to 61.3 (61.5).

The dollar's weighted average depreciation narrowed to 5.11 (5.29) per cent.

IMF appeal to borrowers

● **INTERNATIONAL MONETARY FUND** wants countries running into balance of payments problems to approach it for help earlier than they are doing at present. Back and Page 32; Editorial Comment, Page 18

U.S. Treasury Bill rates

Three 6.494 (6.46) per cent. Sixes 6.896 (6.835) per cent.

U.S. balance of payments

● **U.S. BALANCE OF PAYMENTS** deficit last year amounted to \$36.5bn., says the IMF. Page 4

AUEW conference rejected

any attempt by the Government to interfere with, close or run down British Leyland. Back Page

ICI will face a union demand

to recruit a set proportion of unemployed school-leavers into its white collar ranks when pay negotiations begin this month. Back Page

Oil-exporting countries

borrowed as much last year from international banks as the less-developed countries, while their deposits with international banks grew only slightly faster. Page 33

CBN is expected to recommend

that companies should make it easier for workers to become MPs by promising to re-employ them and protecting their pension rights. Page 7

FRIGG FIELD, which will be

the mainstay of U.K. gas supplies from the North Sea for the next 20 years, was opened by King Olav of Norway. Page 6

SROE IMPORTS from South

Korea rose by 187 per cent. in the first quarter, says the British Footwear Manufacturers' Federation. Page 7

WHEAL JANE tin mine pro-

duction ended yesterday. Page 6

MOTORCYCLE sales were 12

per cent. higher last month than in April, 1977, the first indication of a revival in the U.K. market for about a year. Page 6

COMMERCIAL UNION is in-

creasing motor premiums by 16 per cent. on June 1. Results, Page 29; Lex

Government loses as Opposition join forces on tax cuts

BY RICHARD EVANS, LOBBY EDITOR

AN AMENDMENT cutting the standard rate of income tax by 1p to 33p was accepted in the Commons last night when all Opposition parties combined to defeat the Government.

The amendment was passed by 312 votes to 304 after the seven United Ulster Unionist MPs decided to support the Conservatives, Liberals and Nationalists in calling for the reduction.

The cost of the Tory and Liberal amendment to the Finance Bill, strongly opposed in the Commons by Mr. Denis Healey, Chancellor of the Exchequer, would be £340m. this year and £370m. in a full year.

The impression given by Mr. Healey before the division was that he would study the effects of Finance Bill reverses—there could be more to-morrow—before public sector borrowing requirements before reaching a decision on how to make up any shortfall.

He hinted that a strong candidate would be an increase in the employers' National Insurance contribution, despite the effect this might have on employment.

He clearly rejected the Conservative suggestion to standardise value-added tax at 10 per cent. because of the effect this would have on the retail price index and inflation.

What seems certain is that defeat in the Committee Stage of the Finance Bill, however

wounding, will not precipitate an immediate General Election. Mr. James Callaghan is determined to complete the session, and would have Liberal support in any motion of no confidence.

However, for the first time Mr. Healey spoke without qualification of this being an election year. He went out of his way to accuse the Tories of blatant electioneering by going for the nominal reduction in standard rate.

The unexpected decision of the Ulster Unionist MPs shows that Mr. Enoch Powell and his colleagues are by no means the prospective Parliamentary partners that Mr. Callaghan had hoped might take the place of the Liberals, should he decide to postpone a General Election until next year.

The majority of Ulster MPs see no particular advantage in maintaining Mr. Callaghan's minority administration in office, since Ministers have shown no inclination toward restoring government to Northern Ireland.

Mr. Powell said that his colleagues would vote against the Government on political rather than economic grounds, and hinted that there might be a change of attitude if Ministers could give a pledge of future intentions toward restoring democratic local government in Ulster.

"We feel that our duty at this

point, in our circumstances, is clear, and there will be no derogation of economic or political responsibility when we vote against the Government," he declared.

Mr. Healey accused the Tories of irresponsibility, and said a cut of 1p in the basic rate of income tax could not for administrative reasons take effect until the late autumn at the earliest. Thus a tax cut would involve payment of over six months' tax rebate in October or November, and would have two economic consequences.

First, there would be a sudden increase in purchasing power and a demand for resources at a time when the U.K. economy might already be growing at a rate close to capacity, so that imports would be sucked in.

Second, there would be a large increase in the Government's borrowing needs with immediate effect on the growth of the money supply and on the PSBR.

He said the Government would watch the situation closely in the coming months, and monitor movement of public-sector borrowing requirements continuously to see if it was likely to exceed £5.5bn.

"If it seems likely to do so the Government will take the necessary steps to correct it."

Parliament Page 8

Saudi Arabia may back nominal oil price rise

BY RICHARD JOHNS

SAUDI ARABIA will, it is understood, consider a nominal increase in the oil price at next month's conference of the Organisation of Petroleum Exporting Countries.

At the end of the informal OPEC ministerial conference Sheikh Ahmed Zaki Yamani, Saudi minister of oil, did not concede as much—indeed, he raised the question as to when market conditions would allow any rise in real terms. However, there appears to be more flexibility in the Saudi position than its public stance would suggest.

Having proved its decisive strength at the Caracas meeting last December and at Doha a year earlier, Saudi Arabia does not want to jeopardise the spirit of co-operation which has been restored at the informal conference here over the week-end to discuss longer-term pricing and production strategy.

Moreover, the kingdom may

feel some concession is necessary to satisfy hard-line member states such as Iraq, Libya and Algeria, which feel bitterly aggrieved by the erosion of their purchasing power from petroleum revenue because of the dollar's depreciation.

The economic department of OPEC's secretariat has calculated the fall in the value of members' dollar trade weighted earnings from the beginning of 1977 (when the last across the board rise took place) until April of this year at 18 per cent.

In a speech just over the week-end ago Crown Prince Fahd re-stated Saudi opposition to "excessive increases." These, he said, were against the country's own interests but also involved taking "risks with regard to our friends in OPEC."

In an interview with the Beirut daily *Al-Bayaneh* last week-end, he expressed the Kingdom's confidence in the dollar, but he added: "Saudi

Arabia's commitment to the dollar means that any compensation would have to be in the form of a percentage increase."

Publicly, however, Sheikh Yamani was still predicting yesterday that there would be no rise in oil prices this year but acknowledged that some countries were asking for that and will keep asking when we meet in Geneva."

A Ministerial committee of the six most important members of OPEC to study pricing and production strategy for the future has been established.

Heads of delegations of Saudi Arabia, Iran, Venezuela, Iraq, Kuwait, and Algeria are expected to meet before the Geneva conference. Sheikh Yamani believes that they will be in a position to submit recommendations in about a year when, it is hoped, the oil glut will be over and demand will have picked up.

Men and Matters Page 18

£23m. bid for Pork Farms

BY JAMES BARTHOLOMEW

NORTHERN FOODS yesterday announced a £23m. bid for Pork Farms, the pork pies and sausages company. The offer is worth £20m. more than the net tangible assets of Pork Farms at the time of the latest published balance sheet of February 26, 1977.

Mr. Nicholas Horsley, chairman of Northern Foods, said that he wanted Pork Farms because it was "the Rolls-Royce of the meat manufacturing industry." He had known the company for more than five years and admired its outstanding progress. Pork Farms' pre-tax profit had jumped from £276,000 in 1976-77 to an estimated £2.9m. for 1977-78.

He acknowledged that he was paying a great deal of "goodwill," the difference between the price paid and the net tangible

assets, but the earnings made on those assets were the important thing.

Mr. Horsley claimed that the two businesses have a lot in common, both dealing in cooled food with a short shelf life. Northern Foods is a dairy company, with interests in milling, cakes and brewing. Both com-

panies supply Marks and Spencer and Sainsbury's. Few claims are made that the merger offers operating advantages although Pork Farms could use Northern Foods flour in its pies. The main benefits are seen in terms of management and finance.

Mr. David Sawmorth, chairman of Pork Farms, will become an executive director of Northern Foods.

Northern Foods has generated considerable cash in the last two years, with the last balance sheet including £11m. of cash and investments. The company has made additional profits from its liquid funds by investing in local authority bonds last year.

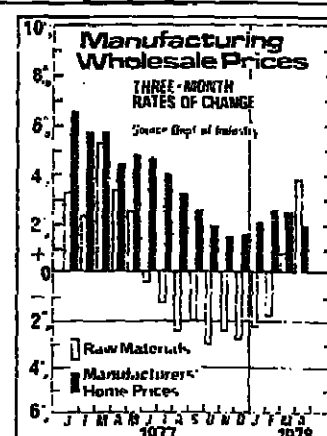
The terms of the Pork Farms offer are four Northern Foods shares plus 315p cash for one Pork Farms share. There is an all-cash alternative of 675p per share. Last night Northern Foods shares closed 3p down at 82p, valuing the share plus cash offer at 853p per share. Pork Farms closed 198p at 665p.

The bid is almost certain to go through because directors of Pork Farms and their families controlling 52.7 per cent. of the shares have irrevocably accepted.

WHOLESALE PRICES (1970=100)

| | Output (Home Sales) | Raw Materials |
|-----------|---------------------|---------------|
| 1977 1st | 248.0 | 341.3 |
| 2nd | 259.2 | 347.7 |
| 3rd | 267.7 | 340.5 |
| 4th | 272.1 | 330.6 |
| 1978 1st | 278.9* | 326.7* |
| 1977 Oct. | 271.0 | 333.8 |
| Nov. | 272.0 | 329.9 |
| Dec. | 273.3 | 328.0 |
| 1978 Jan. | 271.1 | 324.9 |
| Feb. | 279.2 | 324.2 |
| March | 280.5* | 330.9* |
| April | 282.6* | 337.2* |

* Provisional
Source: Department of Industry



Raw material costs jump as £ falls

BY MICHAEL BLANDEN

THE CONTINUED fall in the value of the pound in the foreign exchange markets brought another sharp jump in the cost of industry's raw materials and fuel last month.

The rise will work through to the retail price level in coming months and could make it difficult to hold down the inflation rate during the early part of next year.

However, the overall trend of output factory gate prices charged by manufacturing industry is expected to remain favourable for some time to come.

Officials remain confident that the Chancellor's Budget forecast of a drop in the year-on-year rate of retail price inflation to 7 per cent. by early summer will hold.

The increase in output prices last month, at about 1 per cent, to an index figure of 252.6 (1970=100), was rather more than the 1 per cent. recorded in March.

Nevertheless, the year-on-year rate of rise in this index again dropped from 11 per cent. in March to 10 per cent., and is expected to decline further into single figures.

The underlying trend, indicated by the increase over the last six months, remained at a low level of about 8 per cent. a year for the fifth month running.

Leaving aside the materials bought by the food, drink and tobacco industries, materials purchased by the rest of manufacturing industry also rose in price by 2 per cent. Nearly half of the increase was accounted for by crude oil.

At the factory gate level, prices charged for manufactured goods other than food, drink and tobacco also showed an increase in line with manufacturing industry as a whole at 1 per cent. This was the result of rises spread across most sectors.

In the food sector, however, there was a rise of 1 per cent. in the output price index in April, half of it accounted for by higher prices for bread.

Raw material costs for food manufacturers rose by 1 per cent., mainly as a result of higher prices for home-produced cereals and imported oils and oleseeds.

As a result, industry's raw

material costs even in April were still 31 per cent. lower than a year earlier.

But the sharp reversal of the downward trend in the past two months makes the medium-term outlook for prices more uncertain, particularly if sterling continues to experience the recent pressures.

It takes up to nine months or more for changes in the cost of raw materials to work through fully to the retail price level, though the recent rise could begin to be reflected in factory gate prices during the autumn.

Under section 10, the Secretary of State may, with the consent of the Treasury, guarantee payment to the banks of loans for building ships in Britain. More than £100m has been taken by the banks this year.

The General Council of British Shipbuilding welcomed the announcement.

Mr. Peter Walters, council president, said last night: "The new arrangements will help banks treat shipping loans like other loans, extending the time of repayment when the company involved is sound and well-managed with good modern tonnage and a good future."

"The plan is designed to help companies which have short-term cash flow problems caused by the world recession. The Government, through the Industry Act, has extended the maximum repayment time during which it will guarantee the loans from seven years to 10."

The maximum credit remains at 70 per cent. of the ship contract and the interest on which payment may not be deferred remains at 7 per cent.

The scheme is offered with several conditions. In practice it is likely to be of use to only a small number of tramp ship owners. Applicants must show that they have no recourse to alternative sources of finance, such as further bank loans or cash injections from large parent companies which still have to be paid, and in every case normal repayments will start again by June 30, 1982, by which time the Government expects the shipping recession to be over.

Lex, Back Page

£ in New York

May 8

Previous

Spot 1.8180-1.8185

1 month 1.8180-1.8185

3 months 1.8180-1.8185

6 months 1.8180-1.8185

12 months 1.8180-1.8185

Editorial Comment, Page 18

CHIEF PRICE CHANGES YESTERDAY

(Prices in pence unless otherwise indicated)

| RISES | | |
|-------------------------|------|-------|
| Aberdeen Castles | 93 | + 7 |
| Bonser Eng. | 34 | + 6 |
| Buxton Bate | 96 | + 4 |
| Wark (Jaffew) | 120 | + 7 |
| Control Secs. | 30 | + 23 |
| Dogon | 448 | + 8 |
| LWT A | 135 | + 7 |
| Marchmont | 190 | + 17 |
| Wark off Colls. T. Port | 68 | + 8 |
| Wark off Colls. T. Port | 110 | + 6 |
| Wark off Colls. T. Port | 157 | + 7 |
| Wark off Colls. T. Port | 150 | + 198 |
| Park Farms | 145 | + 7 |
| Robertson Foods | 60 | + 6 |
| Water TV | | |
| FALLS | | |
| Trans. 11pce 1981 | 1992 | - 1 |
| Greenwich 11pce 1986 | 1992 | - 1 |
| (£10 pd.) | 1992 | - 1 |
| S. Rhod. 78-81 | 1992 | - 1 |
| Nat. Carbonising | 16 | - 4 |
| Recd Intnl. | 115 | - 7 |
| Scot. Universal Invs. | 119 | - 4 |
| Ranger Oil | 124 | - 5 |
| Hampton Areas | 119 | - 5 |

CONTENTS OF TO-DAY'S ISSUE

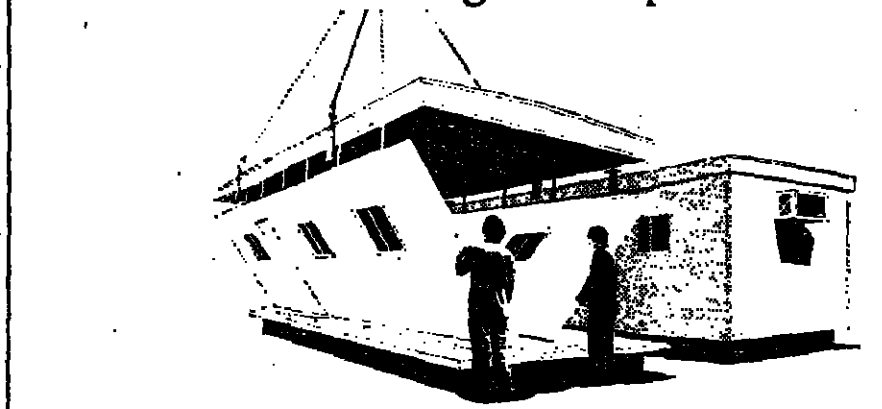
| | | | | | |
|-------------------|-----|-----------------|-------|------------------------|-------|
| European news | 2-3 | Technical page | 13 | Intl. Companies | 32-34 |
| American news | 4 | Management page | 15 | Euromarkets | 32-33 |
| Overseas news | 4 | Arts page | 17 | Wall Street | 35 |
| World trade news | 5 | Leader page | 18 | Foreign Exchanges | 36 |
| Home news—general | 6-7 | U.K. Companies | 23-31 | Fairing, raw materials | 37 |
| —labour | 9 | Mining | 30 | U.K. stock market | 38 |
| —Parliament | 8 | | | | |

FEATURES

| | | | | | |
|--|----|---|----|---|---|
| The Post Office entering uncharted territory | 18 | Paris ten years on | 2 | Algeria losing patience over U.S. gas sales | 5 |
| Society Today: Ray of moonlight on the economy | 27 | Tanzania's Economy | 4 | | |
| The disobedient Civil Servant | 14 | Arthur Burns' new job | 4 | | |
| | | U.S. Aluminium Producers: A welcome for imports | 32 | | |
| | | Dutch shipping—Keeping a cool head at Nedlloyd | 33 | | |

| APPPOINTMENTS | | LETS | | UNIT TRADING | | ANNUAL STATEMENTS | |
|------------------|-------|--------------------|----|--------------------|----|---------------------|----|
| Appointments | 18-19 | Leads | 42 | Unit Trading | 42 | Annual Statements | 42 |
| Business Oppts. | 12 | Men and Matters | 18 | Wine | 38 | Minist. Hldgs. | 38 |
| Crackdown | 12 | Money Markets | 38 | World Value of £ | 30 | More O'Farrell | 28 |
| Financial Guide | 16 | Racing | 16 | Prospectus | 34 | Reverent Chancery | 28 |
| European Outlook | 32 | Salemen | 38 | INTERIM STATEMENT | 34 | Rush and Tompkins | 33 |
| FT-Share Index | 30 | Share Information | 38 | Comm. Union Assoc. | 34 | Shaw and Shaw | 33 |
| Home Centres | 7 | Stock Exch. Report | 38 | PROSPECTUSES | 34 | Tilbury Contracting | 33 |
| Jobs Column | 18 | To-day's Events | 21 | Tekstil Group | 38 | Ultramar | 29 |
| Jobs | 27 | TV and Radio | 14 | Time and Value CC | 38 | Frizzell Gp. | 29 |

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EUROPEAN NEWS

Italian doctor is latest victim of terrorist attacks

BY PAUL BETTS

ROME, May 8.

AS THE Red Brigades remained silent on the fate of the former Prime Minister, Sig. Aldo Moro, terrorists shot and wounded in Milan today a 52-year-old doctor, Sig. Diego Fava.

This latest attack is being taken as further indication that the terrorists are not concentrating all their energies on Sig. Moro's kidnapping, but seem determined to continue with their regular assaults on what they label "lackeys of the system."

In the past few days, a prison doctor in Novara and two industrialists in Milan and Genoa have also been gunned down while the Alfa Romeo car group and the Sit-Siemens electronics concern have increasingly become targets of terrorist attacks.

At the political level, the main parties renewed in the course of week-end rallies their refusal to deal with the terrorists, who are now threatening to carry out their "death sentence" on Sig. Moro for the former Premier's so-called "political crimes."

The Christian Democrat Chief Whip, Sig. Flaminio Piccoli, reiterated the ruling party's appeal to the terrorists to release their prisoner. The party last week said the state would show "generosity and clemency" if the terrorists freed Sig. Moro and there was an effective halt to political violence.

The campaign for next Sunday's regional polls, involving some 400 voters in about one-tenth of the electorate, has been relatively low-key in the wake of the Moro affair. The kidnapping has generated a large measure of solidarity

between the main political parties.

Nonetheless, next Sunday's polls will represent the first effective electoral test since the inconclusive June 1976 general elections.

While Sig. Moro's kidnapping has clearly dominated the campaign with all parties presenting hard law and order platforms, the elections will also be an important test of the country's mood following the recent unique political agreement in which the Communists directly support a minority Christian Democrat Government.

Despite the controversial "humanitarian" position of the Socialist party towards the Moro affair, sharply condemned by the Communists, the recent emergency political formula—largely inspired by Sig. Moro himself—now seems to be growing in strength. In great part this is due to the Christian Democrat's firm stand against the terrorists, which has been openly praised by the Communists.

Meanwhile, official figures released here to-day confirmed the continuing improvement of the country's trade balance. Italy's trade deficit in March amounted to L200bn. (about £120m.), compared to L464bn. for the same month last year.

In the first quarter of this year, Italy's trade deficit totalled L403bn. as against L1,346bn. during the same period last year, according to the National Statistics Bureau, ISTAT.

The improvement is in part due to an increase in export performance but also to a reduction in imports, reflecting the current slow-down in industrial output.

Bank of Portugal's lending rate up by 5%

By Jimmy Burns

LISBON, May 8.

THE BANK of Portugal to-day increased its lending rate from 13 to 18 per cent, as part of a general credit squeeze agreed with the International Monetary Fund (IMF) to follow the country's devaluation on Saturday.

Although details on the credit ceiling to be imposed by individual banks will not be made available until tomorrow, one non-commercial bank, Credito Predial Portugues, carried a prominent advertisement in one of Lisbon's leading afternoon newspapers to-day, offering 19 per cent interest rates for deposits above six months, and 20 per cent for deposits left for more than a year.

Differences over the scale of the credit squeeze emerged as one of the main sticking points in the talks with the IMF on the terms which Portugal had to accept before being granted nearly \$800m. worth of Western aid to cover her balance of payments deficit of \$1,750m.

Along the lines of the 6.5 per cent devaluation announced on Saturday, the five per cent increase in the bank lending rate has been interpreted here by official sources as the fruit of a "negotiated compromise," given the fact that the Fund is reported to have demanded an increase in the rate of more than seven per cent.

Nevertheless, the increase in the rate is bound to have a marked effect on economic activity in Portugal, particularly in the industrial sector where many small companies may be forced out of business, thereby pushing up the rate of unemployment.

The insurrection of May 1968, writes David White, has left a lasting impression

Paris: ten years after the events



Adversaries in 1968: a helmeted policeman and stone-throwing students.

FROM A LATIN QUARTER printshop you can now buy reprinted posters from the troubles of May-June 1968 at Frs.100 or just under £12 a copy.

If 10 years is enough to make political graffiti into antiques, it is also enough to bring a flood of retrospection about the "events" which shook French complacency to its foundations and had the Fifth Republic teetering on the edge of revolution. The May 1968 jubilee has arrived.

Newsprint, magazines and TV programmes are stuffed with reminiscences. A cinema is showing six hours of films made during the student riots and labour strikes. Former militants turned "new philosophers" philosophise. A dozen new books have appeared on the stands, by ex-combatants, journalists, a former Interior Minister, a Police Commissioner and the 1968 Paris Prefect of Police himself.

Yet amid all the re-imaginings, by turn superficial and vague, is a France which has not yet fully digested what happened in 1968, why and what it meant.

This week ten years ago was the turning point. The night of May 10 saw the first paving stones being ripped up to form barricades. About 50 barricades went up in the streets of the Left Bank, and what had begun as a protest on the grim campus of Nanterre turned dizzily into insurrection. Three days later, workers were called out on strike in factories throughout France.

In a year marked by student revolt in several countries, often more violent than in France (West Germany, Italy, the U.S.), France was unique because of the surprising and never-repeated merger between university and worker unrest.

The political movement may have been incoherent, its tactics clumsy, its slogans outdated, but many can be heard airing nostalgia about the atmosphere it engendered among the young: Republic is firmly ensconced.

"We felt inspired, there was something in the air. The intoxication has not returned. Nor has anyone among French writers managed to capture the feelings of the time in the way that Flaubert crystallised the 1848 insurrection, 21 years later, in his 'Sentimental Education'."

Was it worth it? It marked the start of the last chapter of De Gaulle's presidency. But the Gaullists staged a mass rally in June that year, reinforced his Fifth Republic. "Ten years, that's enough" was one of the rallying cries of 1968 against De Gaulle. But 10 years later the Fifth Republic is firmly ensconced.

The Education Minister of May 1968, M. Alain Peyrefitte, is now Justice Minister. Of three student leaders, M. Alain Geismar is a physicist, don, M. Jacques Sauvageot an art history teacher, M. Daniel Cohn-Bendit, "Dany le Rouge," French-born but with a West German passport, is still, at the age of 33, named for returning to France.

The paving stones on the Latin Quarter boulevards have been asphalted over. Iron grills around the tree-trunks, used as student defences, have not been replaced. The police, who found big bulldozers vulnerable to radical newspapers such as

attack, bought a small fleet of Mercedes vehicles for use against barricades, but never had to put them to the test. An outbreak of violence in this year's May Day labour rally, when an anarchist group broke through to the front of the march, fizzled into nothing.

However, there are legacies of 1968. They include the ecologist movement, women's liberation, regionalism, the theme of "self-management" in industry and spontaneous strike movements. The French Communist Party's moves away from Moscow orthodoxy could also be traced to 1968. Then there are the big bulldozers vulnerable to radical newspapers such as

"Liberation," and nearly all people who voted to the left in the Communists in the last election. There is the use of force unheard before 1968, and the less tangible changes in attitudes and relations between generations.

An opinion poll published this week in L'Express magazine found that 1968 was considered as important a date as 1958, when de Gaulle returned to power. More people thought the "events" had had a more effect in education, in employment relations, and in cultural life than those who thought otherwise. Only the verdict on relations between parents and children was in balance negative.

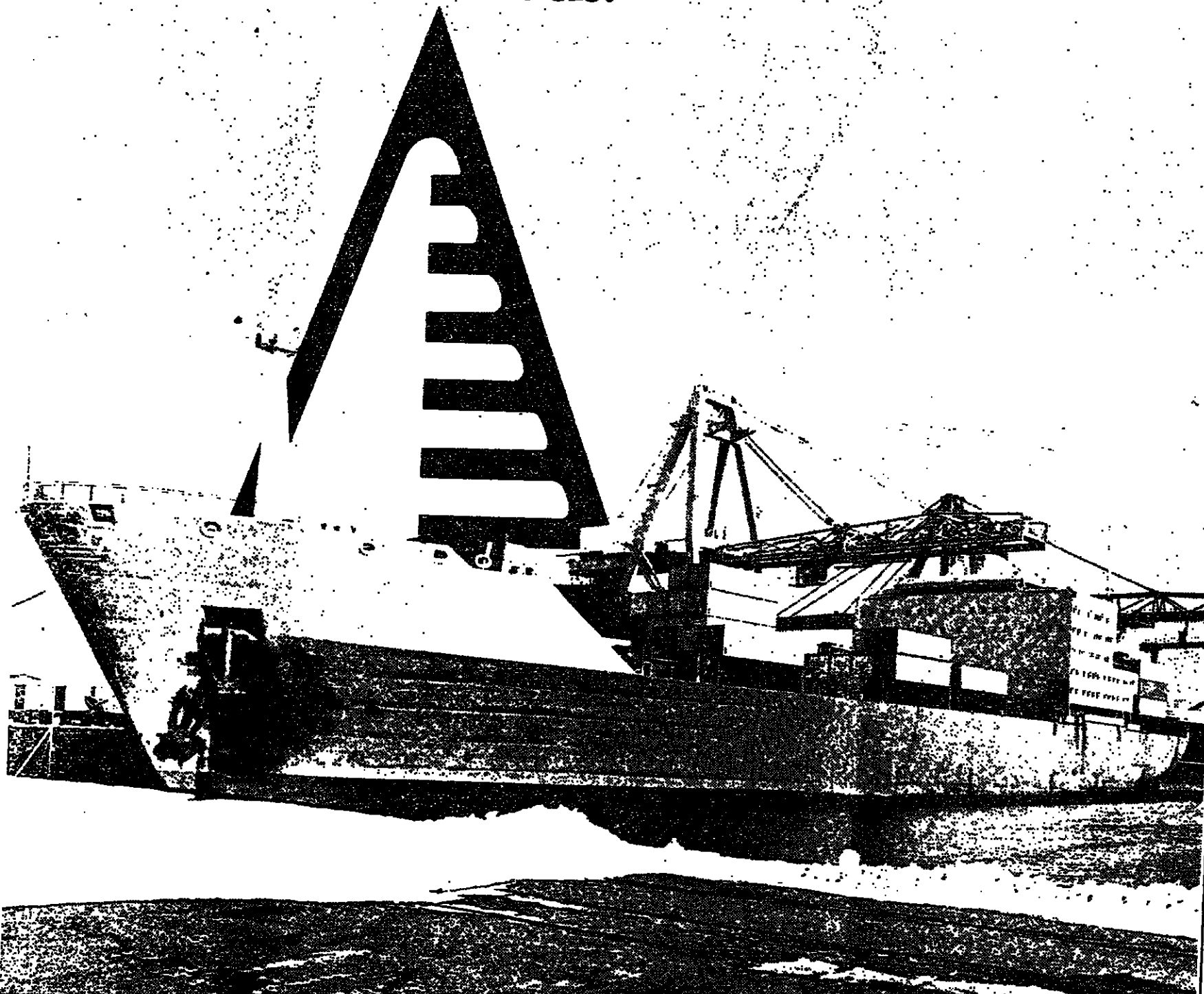
But the specific changes brought in to alleviate worker and student grievances have been mixed results. The 1968 agreements accelerated progress in family allowances, working conditions and the lowest paid a 25 per cent rise. But this was soon eroded.

The educational system has been through two big reforms. Universities have gained autonomy, students brought into faculty decisions, outside university created an open-ended system. But the more flexible system has created its own problems—organisation, too many students. Places such as the Ecole des Beaux-Arts, heavily involved in 1968, are still recovering.

The lycées have been allowed a small part of their time, of their curriculum, but the tyranny of the baccalaureat, the school-leaving exam, still thrives. Complaints one hears these days are much the same as they were 10 years ago.

Among its comments on an upheaval which began and had its centre in the university and schools, Le Monde has a cartoon of a pipe-smoking teacher. "Oh yes," he is saying, "things have changed quite a bit since 68. For instance, I'm 10 years older."

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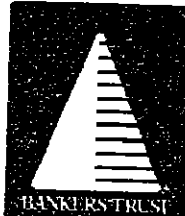
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BIS talks focus on stabilising currencies

By Our Own Correspondent

BASLE, May 8.

CENTRAL BANKERS of the top industrialised countries returned to the problem of how to stabilise their currencies today, but without much apparent progress towards practical solutions.

A participant in the closed-door meeting of central bank governors said that "nothing sensational" had emerged in the talks, which continue to-morrow. The governors' meeting, held under the auspices of the Bank for International Settlements (BIS) falls between the international monetary fund interim committee talks held at the beginning of the month in Mexico City and a series of other key encounters likely to focus on currency problems: the BIS's own annual meeting next month, the Bremen EEC summit and the seven-nation summit in Bonn scheduled for mid-July.

Mr. William Miller, chairman of the U.S. Federal Reserve Board, is expected to attend next month's BIS meeting, the first time he will have participated in the regular Basle sessions since taking office in March. The main storm cloud on the currency horizon—the weakness of the dollar—has been alleviated by the U.S. currency's recent recovery on foreign exchange markets. This trend has been lifted some immediate problems, and the Swiss National Bank, for instance, is envisaging the possibility of lifting its restrictions on currency import and stock purchases, although not immediately. Central bankers were reserved in their assessment of proposals for greater EEC monetary independence and a wider European currency snake, which were outlined by heads of Government at the Copenhagen summit last month.

Front page story

East Germany has given front-page treatment in its main Communist Party newspaper to the West German visit by Soviet President Leonid Brezhnev, and to a message from Mr. Brezhnev congratulating East Germany on yesterday's 33rd anniversary of its liberation by the Red Army, writes Leslie Collett in Berlin.

Bonn demands better deal over AWACS

BY ADRIAN DICKS

BONN, May 8.

WEST GERMAN agreement on the purchase of Nato of the U.S. airborne warning and control system (AWACS) still depends on a more equitable sharing of the costs, as well as on U.S. willingness to buy West German military equipment, Herr Hans Apel, the West German Defence Minister, said in a magazine interview published to-day.

The main weapon which Bonn now hopes to sell to the Pentagon is the Gephard anti-aircraft tank. Dr. Harold Brown, the U.S. Defence Secretary, made clear the cost reservations which Washington has over this deal—due in part to the fall of the dollar against the Deutschmark—when he visited Bonn last month.

Herr Apel admitted that the chances for a U.S. order for the weapon were slim, but also repeated that he would not ask Parliament for the supplementary funds needed for AWACS "before we can see clearly enough to make up the bill."

He told the weekly magazine Der Spiegel that while he remains in favour of the AWACS on strategic grounds, "I am a long way from accepting the 30 per cent share allotted to us Germans. Our share would then correspond to the American one, which certainly cannot make sense. Nor can it make sense to let Italy off with paying only a million dollars."

The Minister's remarks come only 10 days before NATO sees as a clearly-defined sharing of Defence Ministers meet as a work.

group to consider the troubled AWACS project yet again, he hopes that final approval can be given at the summit meeting in Washington. In addition to the question of West Germany's share and to the difficulties this would create for its medium-term defence financial planning, Herr Apel spelled out in greater detail than previously in public the terms Bonn hopes to secure from Washington, he listed:

● Part of the AWACS, and notably the avionics equipment giving the aircraft its sophisticated "see down" radar and control capabilities, should be built in West Germany.

● The NATO base for the 18 proposed AWACS aircraft should be in West Germany.

● Bonn will hope to see U.S. forces stationed in West Germany buy German trucks.

● It will also hope to see orders for West German equipment placed when the U.S. forces here replace present telephone and telecommunications systems.

● Finally, Herr Apel referred to the chance that the U.S. would buy the Gephard for forces deployed in Europe.

The first two of Herr Apel's conditions appear to be relatively close to agreement. Two weeks ago Mr. Jerry Weinstein, a senior vice-president of Boeing, outlined a package which the U.S. aerospace company, builder of the only 10 days before NATO sees as a clearly-defined sharing of Defence Ministers meet as a work.

Aer Lingus strike settled

BY OUR FOREIGN STAFF

AER LINGUS, the Irish airline, £50,000 to £60,000 a day in lost operated normal flights from traffic out of the two affected Dublin and Cork yesterday for the first time in seven weeks.

The settlement, reached late following the resolution of a 5 per cent salary supplement for strike, also supported by air of the clerical workers—members of the Workers' Union of cost the airline an estimated productivity.

NV MEDICOPHARMA, Zaandam

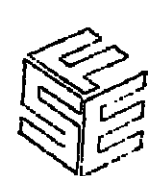
has acquired the operating assets of

CARL BLANK KG
Verbandplasterfabrik,

Bonn

The undersigned acted as advisor

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HOME NEWS

Hammer tries to cool oil row

By Sue Cameron

DR. ARMAND HAMMER, chairman of the U.S. Occidental Petroleum group, tried yesterday to defuse the row with the British National Oil Corporation by publicly dissociating his company from remarks by Mr. Bob MacAlister, one of the organisation's most senior executives.

Dr. Hammer, speaking at a British-American Chamber of Commerce lunch in London, did not name Mr. MacAlister, who is president of Occidental International Oil, the European and African wing of the group, but it was clear that he was referring to an attack by Mr. MacAlister on the Corporation two weeks ago, when he accused it of slowing oil exploration in the North Sea.

The top management of Occidental "was certainly not in agreement with what our senior official said," Dr. Hammer said. He was quick to add that the executive in question was a "strong-minded and valuable man." The group needed men like this.

"You are likely to have read about comments made by one of our more senior people here in Europe on the subject of BNOC—views that are not shared by the top management of our company."

"When strong characters like this deliver an opinion you are not usually left in doubt as to what it is."

Although Occidental had "minor differences now and again" with BNOC, there had never been serious disagreements.

If the full wealth of the British Continental shelf were to be realised, further incentives must be made available to oil companies, Dr. Hammer suggested, that these "further inducements" from the Government might take the form of tax credits.

Frigg Field opens way to mutual aid

BY RAY DAFTER, ENERGY CORRESPONDENT

FRIGG FIELD, which will be the important if we are to succeed in harnessing the energy resources of the world."

Development of the Anglo-Norwegian field has been an international affair. The Frigg group is a Franco-Norwegian partnership comprising Elf Aquitaine, Total, Norsk Hydro and Statoil.

The main production platforms were built in Norway, Sweden, the U.K. and France, while the rest of the equipment came from a much broader spread of countries.

Exploitation of the field—the biggest offshore gas find in the world—has given rise to a unique international treaty between the British and Norwegian Governments.

Mr. Bjartmar Gjerde, the Norwegian Energy Minister, said that Frigg represented a new and important milestone in the development of North Sea resources which would help to secure a broader economic base for Norway.

Norway was permitting a moderate pace of oil and gas production. Even so, the output of oil was still ten times its own rate of consumption.

Norway's policy would take account of the country's own economy and energy supply interests and also reflect the needs of other nations.

Mr. Gjerde's speech came at a time when the British and Norwegian Governments are considering extending their collaboration over North Sea gas collection.

One idea being discussed by officials is that unexploited gas fields in the Norwegian sector should be linked to pipelines on the British side.

The extra supplies of gas would be carried to the U.K. where the Norwegian portion would be separated and transported to the Continent via a new cross-Channel link.

Talks on this scheme are still at an early stage, however. Even if nothing comes of them, it is likely that small Norwegian fields close to the Frigg reservoir will be developed by means of the Frigg/St. Fergus complex.

The Frigg partners are being urged to consider installing compression facilities on their mid-line platform to cope with possible fresh gas supplies in the early 1980s.

Motor-cycle sales up

BY TERRY DODSWORTH, MOTOR INDUSTRY CORRESPONDENT

A STRONG recovery in the U.K. motor-cycle market led to a 12 per cent. increase in sales last month compared with the same period last year.

The figures have brought the first indication of a significant revival in the market since registrations began to decline about a year ago.

Although the industry accepts that sales this year will almost certainly be down on last year's, it is hoping that sales overall will be only about 5 per cent. below the 1977 total.

The biggest problem remains the slump in moped sales. The decline occurred after new speed regulations came into force last July, restricting mopeds to a 30 mph limit and so killing the market for sports models.

In the first quarter of this year sales of mopeds—vehicles of less than 50 cc—dropped by 56 per

cent, compared with the same period last year. Last month, they were down by 44 per cent. to 3,443 units.

Total sales for the industry last month, including motor-cycles, scooters and mopeds, came to 20,692 units. This compares with 21,513 in April last year, giving an overall decline for the industry of only 4 per cent. despite the extremely heavy cut in moped sales.

Housing output recovers in March

By Michael Cassell, Building Correspondent

HOUSE BUILDING output made a marked recovery in March after the very poor February performance.

The Department of the Environment said yesterday that builders began work on 20,000 homes in March, against only 15,300 in the previous month—the lowest monthly figure. The March total was the highest since November.

Private sector house starts totalled 11,600, compared to 9,100 in the previous month and 11,000 a year ago.

Builders started work on 8,400 council homes, a rise of 2,300 units on the month before, but 8,400 down on the level achieved in March last year.

Total starts in the first quarter of this year were 12 per cent. down on the previous three months, but 1 per cent. higher than in the first quarter of last year.

Private homes

The number of homes completed in March rose to 23,100 from the February figure of 20,500. The completions a year ago totalled 25,700.

Public sector completions totalled 12,000, against 9,500 in February and 14,700 a year earlier, while the number of private homes finished remained at the February total of 11,000, the same figure as in March last year.

Completions in the first three months of this year were 7 per cent. up on the previous quarter, but still 5 per cent. down on the same period of last year.

The Department also released figures yesterday showing that an estimated 9,000 homes were demolished or closed during the first quarter through slum clearance action in England. The total was 11,700 in the same period last year.

A takeover bid seems unlikely. The major factor that has led Gold Fields to withdraw, at a loss of nearly £8m., is that the amount of tin available is less than once thought.

The turning point for Gold Fields was the closure of the neighbouring Mount Wellington mine, owned by Cornwall Tin and Mining. The two mines face each other across the Carnon Valley, near Truro. Both have had to cope with water seeping into the workings.

Once the Mount Wellington pumps are turned off on Friday, Wheal Jane is faced with an extra water problem which can

Wheal Jane pit shut as Gold Fields cuts losses

BY PAUL CHEESBRIGHT

PRODUCTION at the Wheal Jane tin mine in Cornwall stopped yesterday, and Consolidated Gold Fields, the owners, confirmed that closure of the mine, announced on April 26, would take place as planned.

"The prospects of an economic return at Wheal Jane are so uncertain that further investment in it cannot be justified," Gold Fields said.

Pressure from trade unions and local MPs, and a meeting between the company and Mr. Alan Williams, Minister of State for Industry, had raised hopes that a formula to keep the mine open might be found.

Certainly, the Government, having come round to the desirability of keeping the mine open for employment reasons, was prepared to continue talking this week. This suggests that the speed with which Gold Fields has acted has come as something of a shock.

Some keep on hoping. Mr. Harry Stevens, Transport and General Workers' Union secretary at Falmouth said he would be approaching Mr. Moss Evans, general secretary, to seek another meeting with Mr. Williams.

£8m. lost

It is believed that tentative interest in Wheal Jane has been shown by another mining group. Whether this could lead to a bid for the mine or whether the interest is confined to buying some relatively new equipment is unclear.

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Once the Mount Wellington pumps are turned off on Friday, Wheal Jane is faced with an extra water problem which can

work for about 30 men on regular shifts. This will take about a year.

Textile exports win praise from Varley

BY RHYS DAVID, TEXTILES CORRESPONDENT

THE Government's commitment to maintaining a comprehensive textile and clothing industry in the U.K. was emphasised yesterday by Mr. Eric Varley, Secretary for Industry.

Mr. Varley was speaking at the opening of a £8m. spinning mill by Carrington Viyella at Atherton, near Manchester, the first new mill to be opened in Lancashire for at least 50 years.

He said that textiles still represented Britain's third largest manufacturing industry, with more than 800,000 employees and an output of £8bn. last year.

The industry also made a major contribution to the country's balance of payments, increasing its exports from £1.1bn. in 1975 to nearly £2bn. last year.

It was vital for the industry to maintain a high level of investment and to continue improving productivity in order to achieve greater competitiveness.

Mr. Varley, praising the company for going ahead with the investment, said: "We shall continue to be vigilant in monitoring imports from low-cost sources."

It was also felt that Mr. Chapman's allegations of his cost-cutting ideas being blocked by other civil servants against the wishes of Ministers did not give an accurate picture.

Other members of the Agency were also carrying out economy drives at the same time as Mr. Chapman and were achieving substantial savings by different methods. It is claimed. It is felt that Mr. Chapman may have felt frustrated at not having his particular methods adopted unilaterally by the whole Agency.

Feature Page 14

able to declare industrial improvement areas and help companies.

Mr. Shore said that the 14 newly announced "third tier" of inner city areas to be helped would have the same status as the programme districts.

The 29 partnership and programme districts already designated for aid under the Inner Urban Areas Bill, which is expected to have its second reading in the Lords next week.

The Bill provides for districts to be made loans of up to £100,000 per cent. on commercial system was not on any black list, as far as he knew, so he treated any such inquiry in the normal way.

Mr. Wales told the jury that, to the best of his recollection, he had never met three of his co-accused, namely, Mr. Holmes, Mr. Ash, and Mr. Taylor.

Earlier, Mr. Ash told the court there was never any intention, as far as he knew, to defraud the Bank of England, and the scheme was conceived by other people altogether to obtain money from potential investors quite unconnected with the dollar premium system.

In later evidence, Mr. Wales admitted that he had met the other two defendants, Mr. Robinson and Mr. Atkins, but only briefly, and they had come to the Bank of England's exchange control inquiry counter, then adjourned to Balls Brothers Wine Bar nearby.

"I was signing 200 letters a week, and it would be humanly impossible to remember details of every inquiry," he added.

"But there is no truth in the prosecution's suggestion that I was taking a dishonest interest in their case."

The hearing continues to-day, with Mr. Wales still in the witness-box.

only be solved by extra expenditure. Running Wheal Jane at a loss, Gold Fields was not prepared to make this extra commitment.

The Government is understood to have offered Gold Fields some assistance in keeping the Mount Wellington pumps going, in addition to payment of the temporary employment subsidy. But there seems to have been no disposition to underwrite what could be continual losses.

Gold Fields discussions with the Government have failed to bridge the gap between the Government's concern about local employment and the balance of payments, and on the other hand, Gold Fields' concern with the longer-term profitability of the mine.

The immediate effect of Wheal Jane's closure, added to the earlier decision to close Mount Wellington, is to put some 500 people on to the labour market in an area where there is already 11 per cent. unemployment.

Expressing his concern, Mr. Stevens said "We don't want to get in the position where all we do is export miners."

Our Bodmin correspondent writes: Mr. David Penhaligon, the Liberal MP for Truro, is likely to raise the issue of the Wheal Jane closure in the Commons adjournment debate on Thursday.

Expressing his annoyance at the timing of the Gold Fields announcement, he said: "I was given to understand over the week-end that the talks would continue well into this week, and that some decision would be known about Wednesday."

"Even after this company announced publicly the closure of Wheal Jane, I got on to the Industry Department and was assured again that discussions were still going on."

Mr. Dennis Young of Gold Fields, said that the Department of Industry was told about the closure last Friday.

Half the workforce will be laid off on Friday, but there will be work for about 30 men on regular shifts. This will take about a year.

Mr. Chapman claims in a book published to-day, detailing his methods of cutting waste, that he had the backing of three successive junior Ministers for wider implementation of his cost-cutting programmes. But he says that senior officials delayed implementing the ministerial directives.

Eventually, at the beginning of 1974, he resigned from the Civil Service. Shortly afterwards, however, the Public Accounts Committee began probing into his reasons for southern region's success in achieving substantial economies.

In response to a question from the committee about why southern's record for economies was far better than that of any other area, Sir Robert Cox, the executive, included as part of his answer: "The southern region covers, among other things, the Aldershot area, and in the years immediately before 1969 there had been substantial re-deployment of military resources. There had been a lot of staff moving north."

Dr. Gilbert said in a statement in the Commons last month that between 1965 and 1969 "no permanent transfers of major units from Aldershot took place during the period in question."

Over the numbers of both civilian and military personnel dropped by only 350, to 11,950.

The discrepancy in the statements was also to light after a Parliamentary question from Mr. Mike Thomas, Labour MP for Newcastle Central East. Officials in the Property Services Agency found that an error had been made in previous internal investigations leading to the mis-information being given to the Public Accounts Committee. It was being stressed in Whitehall last night, however, that there was no question of the mistake being deliberate.

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lists carry an additional 10 per cent. buyer's premium.

Some exceptional prices were also paid for a Sotheby's auction of gold boxes and objects of vertu which totalled £173,755. A gold and hardstone snuff box made in Dresden in 1777 by Johann Christian Neuber sold for £35,000 to a French collector. This is the highest sale price for the snuff box.

S. J. Phillips, the London dealer, gave £14,500 for a 19th century diamond and emerald snuff box, a cup for Turkish coffee. A French gold snuff box of 1728 by Jacques Cartier sold for £7,500, and a Swiss gold snuff box made in 1720.

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Blunder by civil servants misled MPs

BY DAVID CHURCHILL

SENIOR civil servants in the Property Services Agency gave inaccurate information to a Select Committee of MPs in 1973 when it was investigating cost-cutting measures in the Civil Service. The civil servants had claimed

in evidence to the Public Accounts Committee that substantial economies had been achieved in its southern region only because a considerable number of troops had been transferred to another area.

But Dr. John Gilbert, Minister of State for Defence, told the Commons recently that there had been no such troop movements.

However, the misinformation in 1973 effectively curtailed the committee's probe into why the scale of economies achieved in the Property Services Agency's southern region had not been found elsewhere.

Last night Mr. Leslie Chapman, the former civil servant responsible for achieving the economies, claimed that this was further evidence of the way in which his former colleagues blocked his cost-cutting activities.

He was calling for a top-level inquiry into why these economies had been delayed or not implemented in other areas.

Feature Page 14

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HOME NEWS

Taxmen's 'new approach' attacked

BY DAVID FREUD

A CAMPAIGN against the Inland Revenue's "new approach" in verifying tax returns was launched yesterday by the Federation of Self-Employed.

The federation plans to help individual taxpayers fight cases where there is disagreement with the Revenue and institute local campaigns. It has already sent members a leaflet telling them how to handle interviews with tax inspectors.

The "new approach" was introduced at the start of last year so that the 1.2 million self-employed dealing with verification of tax returns under Schedule D (self-employed) could work more effectively.

It restricts inquiries to cases where there is genuine concern that something is wrong. The inquiries are detailed and exhaustive.

Mr. Tom Tuttle, assistant director in charge of the "new approach," said yesterday that since it started the number of cases in which the returns had to be adjusted had fallen by half, but the amount of additional tax taken had risen.

More than three-quarters of accounts examined had needed adjustment.

The federation claimed that the Revenue was tackling one trader in eight each year, which meant that every self-employed trader would be examined by 1984. It had received a list of questions to be asked by a tax inspector covering a taxpayer's life-style.

The Revenue denied that there was a target. Schedule D taxpayers whose accounts were examined were never picked at random. No official list of questions had been issued from Somerset House, although the list held by the federation could have been an "aide-memoire" compiled by an individual inspector for his own use, Mr. Tuttle said.

Jobs-back scheme to aid MPs from industry

BY JOHN ELLIOTT, INDUSTRIAL EDITOR

COMPANIES are likely to be urged soon to make it easier for their employees to become members of Parliament by agreeing to re-employ them later and by protecting their pension rights.

The idea has been tried out in large companies such as ICI, Shell and BP. The object is to encourage more people with industrial and managerial experience to enter Parliament.

Leading industrialists believe that there are too few such MPs. The object is to encourage more people with industrial and managerial experience to enter Parliament.

The recommendation is expected to emerge from the Confederation of British Industry, which last autumn set up a working party on parliamentary representation, under the chairmanship of Lord Carr, the former Conservative Minister, who is now a member of the confederation's council and chairman of its education and training committee.

ICI's scheme, which may be put forward as a model, was introduced last summer and for parliamentary candidates to have time off to fight elections. It applies to all employees with five years' service and provides that when someone becomes an MP, he will be guaranteed re-employment for up to 10 years on at least the same terms as when he left.

This means he will be offered a job of the same or possibly better status and pay. If he accepts the offer and returns to ICI his period as an MP will be counted as pensionable service. Shell has a similar system, but with a limitation of two Parliaments or seven years, whichever is the greater, instead of ICI's ten years.

Lord Carr's committee was set up partly as a result of interest generated by these schemes. It is looking for ways of helping people to become members of local councils, the European Parliament, and any future regional assemblies, as well as the Commons.

Guidance soon

Lord Plowden of Tube Investments and Sir Leslie Smith of British Oxygen are members of the committee, which includes supporters of both main political parties.

It has commissioned a survey of the attitudes and practices of some 500 companies and will shortly be preparing its report for presentation in a couple of months to the Confederation's council. It is hoped that guidance will then be issued to member companies.

The survey has shown that a large number of companies believe that their employment policies should include positive help for would-be MPs, but that few have been developed so far.

It is also probable that the largest companies, rather than those with only a few thousand employees, will be most interested because the smaller concerns are less likely to think they have sufficient managerial talent to spare.

Lord Carr's committee is also consulting the political parties, most of which seem to believe that Parliament would benefit if company schemes encouraged both experienced and mature people to try to become MPs.

Issues that the committee will soon tackle include whether a company should go further than ICI and Shell and top up an MP's salary, which is just under £7,000 a year.

This could lead to allegations of conflicts of interest, especially if an MP gained parliamentary or ministerial posts, as could any attempt by the company regularly to brief its MPs.

Some industrialists are also loath to commit themselves to helping people to become MPs for fringe political parties such as the National Front or far-Left groupings, and there are also differing views about the length of period that any re-employment guarantees should last.

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Businesses providing extra or improved accommodation for tourists in the rural parts of development areas are eligible for assistance. Agriculture, horticulture, professional firms, retail trades and statutory authorities do not come under the Council's purview.

A further cash payment for the 1975 account alone of about £6,000 was requested from a member who had underwritten a share of the premium of £40,000.

The new audit will not change the deadline for payment for this amount, which is due on May 19.

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Second opinion sought on Lloyd's audit

By John Moore

MERRETT DIXEY Syndicates, the Lloyd's of London underwriting agent, has asked for a second opinion on an audit for the 1975 account of the troubled syndicate number 782 of Mr. Frederick Sasse.

This surprise move follows the takeover last week of all the Sasse syndicates by Merrett Dixey. Syndicate number 782 still remains suspended at Lloyd's until questions about its solvency are sorted out. It ran into difficulties last December when it became clear that a Brazilian reinsurer group was not prepared to settle claims under a reinsurance contract on 1,300 property risks in New York since then the claims have been mounting.

The fresh audit, to be conducted by Lloyd's panel auditors Baker Sutton, will be covering a period already examined by another Lloyd's panel auditor, Paula Turner Lake for the syndicate—that of the 1975 account.

Just over two weeks ago the 109 members of syndicate number 782 were asked for a cash payment by Mr. Sasse, not only to cover the severe burden caused by the dispute with the Brazilian reinsurers for the accounting years 1976 and 1977 but also for the 1975 account.

Mr. Sasse explained that "unfortunately both the settlements and outstanding claims notified during the third year of the 1975 underwriting account were higher than anticipated and as a result there is a loss on the closing of the 1975 account."

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Enterprise Board worried over access to its books

BY JOHN ELLIOTT, INDUSTRIAL EDITOR

PARLIAMENT'S Public Accounts Committee showed no signs of being diverted from its wish, stated at a earlier hearing last week, to have an Auditor's General's examination. The Comptroller and Auditor General should have "untrammelled access" to the Board's books.

Sir Leslie Murphy, the Board's chairman, said he would not be able to operate commercially under the constant examination by the Auditor General, who is responsible for carrying out the Committee's investigations.

At a hearing of the Committee last night he added that one foreign company now in talks with the Board about a subsidiary "would run a mile if all these things you are talking about were to come to pass."

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accountability through the Department and its Secretary of State, Mr. Eric Varley.

But this was not sufficient for the Committee's MPs who are using the recent creation of the National Enterprise Board—and the British National Oil Corporation—to examine ways of improving the accountability of state-owned concerns. They want to remedy what they regard as a lack of sufficient accountability by the older nationalised industries.

Mr. Du Cann started the hearing last night by stressing that there was "no confrontation" between his Committee and the Board.

During the exchanges Sir Leslie said that Rolls-Royce, which is owned by the Board, had "some lean years yet to come." There was not an immediate prospect of a "great upsurge" in the company's profits.

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PARLIAMENT AND POLITICS

With the Ulster Unionists ranged against Budget policy . . .

Healey warns on effect of 1p income tax cut

BY JOHN HUNT, PARLIAMENTARY CORRESPONDENT

A WARNING that a cut of one penny in the standard rate of income tax could mean an increase in the National Insurance surcharge paid by employers was given by Mr. Denis Healey, Chancellor of the Exchequer last night as the committee stage battle on the Finance Bill got under way in the Commons.

The Chancellor—replying to the Conservative amendment seeking to reduce the basic rate of income tax from 34p to 33p in the pound—also hinted that such a move could mean an increase in company taxation and higher stamp duty.

Moving the amendment for the Conservatives, Sir Geoffrey Howe, shadow Chancellor, claimed that there was no need for any increase in the National Insurance surcharge which, he said, would amount to a tax on jobs.

Sir Geoffrey said that the cost of a penny reduction would mean £300m. in the current year and £700m. in a full year. He described the amendment as a "token reduction" heralding the further changes that the Tories would make in return to power at an election.

According to Sir Geoffrey, the cost of the tax cuts could well be met by appropriate reductions in public expenditure or the adoption of the Conservative proposal for a ten per cent. flat rate for VAT.

He argued that expenditure cuts were perfectly feasible as Mr. Healey, having cut public expenditure by £400m. over the past two years, had now increased it by a similar amount in the present Budget.

If the Chancellor refused to accept this, then Sir Geoffrey once more challenged him to let the people decide the issue at a General Election as soon as possible.

But Mr. Healey dismissed the Conservative proposal as "an irresponsible and electioneering amendment." He pointed out that the Liberals had suggested an increase in the National Insurance surcharge as a way of paying for the penny tax cut, despite the administrative difficulties that this would involve.

"It may be possible, in spite of difficulties, to find something here," Mr. Healey added. "This is one area where I recognise that the present burden in Britain is considerably lower than most countries in the European Community."

In addition, he said, Sir Geoffrey had failed to mention two other possibilities—"an increase in company taxation, for example, or an increase in stamp duty for those who can best afford it."

"Action in any of these fields would be undesirable. It would be a consequence I would prefer to avoid. All I can claim is that action in this area would be less than actions in the areas recommended by the Conservative opposition."

"I don't want to take such action but I have an inescapable responsibility for the economy and finances of this country and I shall not shrink."

Mr. Healey dismissed the Conservative proposal for a higher rate of VAT as "irresponsible and electioneering."

rate of VAT on the grounds that it would increase prices "at a stroke," and jeopardise the hopes of keeping inflation down in the coming year.

It would cancel out any advantages for the average family which the cut in the basic rate of tax might have and would impose additional burdens on the lower paid.

The Chancellor told the House: "If the committee did agree to approve the reduction and the House upheld this decision, then the Government must, of course, accept that decision and would do so, although we believe it is wrong."

"The Government would, thereafter, watch the situation closely as regards the development of the economy in the coming months and as regards any further irresponsibility in the Finance Bill debate."

The outlook for the public sector borrowing requirement was inevitably uncertain. But if resources at a time when the economy may already be growing at a rate close to capacity so that it sucks in imports and creates jobs abroad instead of in Britain.

"Secondly, the payment of the rebate in October or November would bring a large increase in the central government borrowing requirement with immediate effect on the growth of money supply and of the PSBR."

"I believe the committee would be highly imprudent to take measures now which would have consequences in six months' time which might be seriously damaging to the sustained growth of the economy and our hopes of keeping inflation under control."

Mr. Healey added that he could not guarantee that the consequences would be as he had described. The Conservatives would not have asked the House to accept such an amendment to effect in an election year.

It seemed likely to exceed the £3.5bn. laid down in the Budget, then the Government would take the necessary steps to correct it.

The cut of a penny in the basic rate would, for administrative reasons, take effect by late autumn at the earliest. It would then involve payment of six months' tax rebate in October or November.

This would have two consequences. "First, there would be a sudden increase in purchasing power and demand for

"All of these risks will increase if the irresponsibility of the Opposition leads to further losses of revenue as the Finance Bill moves through the House," he declared.

The Chancellor rejected all the proposals which had been made in an earlier debate by Sir Geoffrey for compensatory cuts in public expenditure to cover the tax reduction. These proposals, said Mr. Healey, "tumbled in your hands" when examined.

Sir Geoffrey's proposal to cut back the increase of £300m. granted to the National Enterprise Board would bring NEB activity to a complete halt later this year. It would deny British Leyland and funds beyond the £450m. recently authorised and throw 100,000 people out of work.

If the money was clawed back, the NEB would also have to stop support for Rolls-Royce just at the moment when a huge American airlines order was to be won.

The proposal to cut £41.5m. in selective assistance to industry would be impossible because the funds were already committed.

Sir Geoffrey had also proposed a saving of £10m. on municipalisation and the Community Land Act but, in fact, said Mr. Healey, the total savings possible in these areas were far less than that.

There had also been suggestions in transfer payments. This would mean cancelling the increase in child benefit, an increase in school meal charges and refusing the rise in pensions during November. He supposed that this was what the Opposition really wanted.

Liberal spokesman Mr. John Pardo described his party had come to the view that income-tax was generally a bad tax in modern circumstances. It was certainly a bad tax at its present levels.

Britain would inevitably have to harmonise with her European competitor countries and take more from taxes on spending and less from taxes on income.

There was a "very strong public health argument" in favour of higher taxes on alcohol and tobacco. It was a responsibility the Chancellor had shouldered because he believed the price index arguments were greater than public health.

Mr. Pardo described the one-penny cut as "not a major reform of the tax system." It was a step in changing the balance between tax on income and tax on expenditure.

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Our duty is clear, says Powell

BY IVOR OWEN

ANNOUNCING the decision of the Ulster Unionists to go into the lobby against the Government on the income-tax amendment, Mr. Enoch Powell (Down S) emphasised that they had mainly been influenced by political rather than economic reasons.

It was only in the closing passage of his 14-minute speech that Mr. Powell—with the crowded chamber closely following his every word—indicated the direction in which the Ulster vote would be cast.

"This is a matter of political will more than a debate on economic judgment," he declared. Mr. Powell explained that the beginning of the present Parliament, the Ulster MPs had decided that they would use their voting powers to redress the political injustices suffered by Northern Ireland.

The decision already taken to increase the number of Ulster MPs in the House of Commons had been a step forward, but last week's local Government elections in other parts of the U.K. had underlined another damaging deficiency. Northern Ireland did not enjoy the benefit of democratic local Government.

A hint that the Government—if not immediately, then on some other occasion—might be able to persuade Mr. Powell and his colleagues to take a different course came when he conceded that the Government's intention to remedy what was perhaps the second most keenly felt political injustice in Northern Ireland. But, so far, there had been no sign from the Government.

Because of this, said Mr. Powell, he and his colleagues felt that they would not be discharging their duty to their constituents if, by supporting the Government in what was an essentially political matter, they ignored their prime duty and cost their votes in support of the Government.

"We felt that our duty at this point, in our circumstance, is clear, and there will be no derogation of economic or political responsibility when we vote against the Government."

In a written Commons reply yesterday, Mr. Peter Shore, Secretary for the Environment, who ordered the inquiry, acceded to Mr. Powell's request for a detailed reply to the recommendations of the Parker report.

Twelve of the 16 recommendations—those addressed to BNFL itself and to the Government—were accepted unconditionally. They included the recommendation that BNFL should put greater effort into reducing its emissions of radioactive effluents, and the recommendation that BNFL should be made a public corporation.

Mr. Shore said yesterday that it would be made a condition of authorisation for the project that the company should design it so that a "clean-up" plant could be added "if reasonably practicable."

Another recommendation accepted by the Government was for more facilities for whole-body monitoring of any members of the public who fear that they may have picked up radioactivity released by the new plant.

Mr. Shore said the Government also accepted entirely the underlying purpose of another three recommendations, relating to more fundamental organisational changes. He has already announced that he will be setting up a new advisory committee on nuclear waste. Yesterday, he said that Monday.

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Rodgers sees no easy answer to PLA crisis

BY IVOR OWEN, PARLIAMENTARY STAFF

PRICE, WATERHOUSE have been called in by Mr. William Rodgers, Transport Secretary, to advise him on the financial forecasts made by the Port of London Authority which lost £2m. last year and has been said by its chairman, Mr. John Cuckney, to be heading for effective bankruptcy.

The Minister warned in the Commons that no easy solution was to be found in the crisis facing the PLA. He had advised the chairman that any proposals from his board should be designed to chart a path to viability and a secure future.

While stressing that the Government has no executive authority over the PLA, Mr. Rodgers, with Mr. Peter Shore, the Environment Secretary and MP for Stepney and Poplar at his side, said he was considering with other Ministers by what means the Government could assist the Authority.

A suggestion by Mr. Peter Viggers (C, Gosport) that the final solution would have to include the closure of the upper docks—the only question is when will they be closed—he insisted—brought an angry response from Labour's dockland MP, who called for an intensive effort to revive trade on the Thames.

Mr. Rodgers refused to be rushed into any hasty conclusions. No proposals for closing the upper docks had reached him from the PLA and he was not prepared to give any indication of what his attitude should be should they materialise.

But in saying earlier that there was no easy solution, he stressed: "We are very fully aware of the industrial, social and environmental aspects of the problem."

Mr. Robert Mellish (Lab, Bermondsey) summed up the view of dockland MPs when he criticised the record of the PLA and pointed to the contrast between the "dead" river and the "lively" one.

"We are now faced with the situation where mile upon mile of the greatest river highway in the world is derelict and bankrupt. If necessary, should be used to bring life back to the Thames."

Mr. Rodgers acknowledged the strength of feeling among dockland MPs and agreed that the decline on the Thames and in the Port of London had been "very far-reaching consequences."

He was sure that any analysis and decision on the problem must take account of our wish to see the river flourish and regain as much traffic as possible.

Mr. Peter Temple-Morris (C, Leominster) asked why the Government had taken no action whatever until now was collapsing around them. The problem first arose two years ago and since then £16m. had been paid out in extra loans alone.

Amid Labour protests, he declared: "The hereditary dockers, like the hereditary peers, now at least has to contribute towards earning his living."

Mr. Rodgers replied that this was not a helpful contribution towards solving the problem. After again underlining the limited extent of Ministerial power over the PLA, he stated: "This has been a developing situation and has only been brought sharply into focus by the present chairman, who was appointed last autumn and revealed to me the present state of affairs within the last month."

Mr. Norman Fowler, shadow Transport Secretary, asked if the Government accepted Mr. Cuckney's view that the Port of London would have to be slung down very substantially.

If this were done, he said, there was no reason why the Port, based on Tilbury, should not prosper. "This is a time for decisions, and the decisions clearly have to be tough."

Mr. Rodgers agreed that with the Port "on the edge of bankruptcy," the decisions would have to be made as quickly as possible. In the House of Lords, Lord George-Brown described the PLA as "a bankrupt authority, trading, I submit, illegally."

The Government accepted the principle that security measures should be verified independently of anyone involved in their design and/or operation.

The Windscale report recommended a single inspectorate to take responsibility for all radioactive discharges. Mr. Shore said: "Pending the Government's decision on the unified pollution inspectorate recommended for England and Wales in the fifth report of the Royal Commission, the Radiochemical Inspectorate of my department will, in collaboration with the Ministry of Agriculture, Fisheries and Food, be responsible to Ministers for the tasks described by the inspector."

It is thought unlikely that the Government will, in fact, agree to a unified pollution inspectorate.

The last of the 16 recommendations, namely, that outline planning permission should be granted for the project, was formally rejected by the Government when the report was first published, but was replaced by a new development order on which MPs will be voting on Monday.

Mr. David Kimbell has been appointed director of the overseas Group, will be director, finance and planning.

Mr. M. H. Howarth has been elected director of RICARDIO (SINCE ENGLAND) (1977). He is managing director of his subsidiary G. Cussons. Mr. C. J. French and Mr. M. L. Monaghan, directors of Ricardio, have become directors of G. Cussons.

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Labour finds re-selection formula

BY RUPERT CORNWELL, LOBBY STAFF

LABOUR HAS taken a big step towards settling one of the most divisive issues between Left and Right-wingers—whether sitting MPs should automatically elect undergo re-selection by their local party before each general election.

A compromise formula was accepted last night in the face of some opposition by Transport House's organisation sub-committee. It will now go before the full National Executive Committee, probably later this month, where its chances of success look bright.

The split between the Left, which has favoured re-selection, and Labour's Centre-Right which has opposed it, has bedevilled

the party for some while and threatened to cause a damaging row at a possible delicate juncture just before the next election.

The new idea—significantly devised by a Left-winger, Mr. Joe Ashton, MP for Basildon—calls for each member of Parliament to be reaffirmed by a special meeting of his constituency general management committee between 18 months and three years after his most recent election.

Only if this resolution is defeated will the MP face a full-scale re-selection conference at which he will have a place on the short list, of right. He will also be entitled to appeal to the

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LABOUR NEWS

Pay curb may hurt Labour's poll effort

BY CHRISTIAN TYLER, LABOUR EDITOR

THE GOVERNMENT could suffer at the polls if it prevented trade union activists from bargaining freely with employers, Mr. Moss Evans, general secretary of the Transport and General Workers' Union, said yesterday.

He was commenting on the Prime Minister's May Day speech in which Mr. Callaghan spelled the end of free collective bargaining under Labour and called for a new understanding with the trade unions.

Mr. Evans said that if trade union activists became disillusioned by the imposition of norms and percentages, "then they won't work as enthusiastically as they have done in the past and they would have done in other circumstances."

But he couched his warning with a promise that the union would pull out all the stops to see Labour re-elected with a big majority, even though he himself might be regarded "as the greatest critic of the policies that are being proposed."

Asked whether his union would fight against another imposed incomes policy, he said

the word fight was "a misnomer." But he added that the TWU would support industrial action by its member in public or private sectors who decided to challenge an imposed wage deal backed by Government threats of sanctions against their employer.

Millstone

He said the 12-month rule, which the Government hopes will be extended, "should not be allowed to become a millstone around our neck." Where deals were for 12 months they would be honoured. But anomalies sometimes demanded that a six-month deal or even a two-year deal was more appropriate. The rule should be allowed to expire when the TUC's commitment to it under Stage Two ran out.

Mr. Evans, who is now one of the six TUC leaders who confer regularly with Ministers, said the union had given him free rein to participate in the private round of talks on the economy which have just begun. Since there was no question of an agreement

on Stage Four, it was "common sense" to keep the union's demands to the fore.

Instead of trying to impose pay norms, the Government should give a lead on shorter hours and better conditions, he said.

Other trade union leaders yesterday addressed themselves to the question of free collective bargaining.

Mr. Walter Johnson, MP, president of the Transport Salaried Staffs Association, told the union's conference in Torquay that trade union leaders who said it was necessary to get back to free collective bargaining "must be living in cloud-cuckoo land."

He said he was a supporter of voluntary incomes policy, provided the Government acted on prices as well.

Mr. Bert Hazell, president of the National Union of Agricultural and Allied Workers, warned delegates in Southampton that the union would need more industrial muscle than it had to benefit from a return to free bargaining. The union did not have even a majority of farm-workers in membership.

In Glamorgan, Mr. Emylyn Williams, president of the South Wales area of the National Union of Mine-workers, told the annual conference that miners would fight to restore the "disastrous" cuts in living standards over the last three years.

Electricians call for shorter working week

BY NICK GARNETT, LABOUR STAFF, IN SCARBOROUGH

A SHORTER working week, large increases in basic pay and better fringe benefits, were called for yesterday by the Electrical and Plumbing Trades Union's annual conferences for private contracting and Government departments.

Delegates representing the union's 40,000 members working for electrical contractors urged their executive to seek a 38-hour week, with a fourth week's holiday and a more than 60 per cent increase in electricity's basic hourly pay, from the present £1.75 to £3.

The union's 15,000 industrial civil servants called on the executive to press for a 35-hour week, with a pay claim for next year based on a comparability exercise with craftsmen in private industry. Union officials believe the discrepancy here is about 25 per cent.

The decisions are recommendations, rather than mandates, for the executive.

Mr. Charles Morris, Secretary of State for the Civil Service, told delegates representing electricians and plumbers in Government departments that pay for the Civil Service should be determined by what civil servants felt to be fair, and what "informed public opinion" felt acceptable.

The latter, said Mr. Morris, was the same as saying what was "seen to be in the public interest."

He referred to the rally and lobby of Parliament to-morrow organised by the Transport Workers to press the claims of its 30,000 members in the industrial civil service.

The Government accepted that "as a general proposition" fair comparison between the public and private sector was the right method for determining industrial and non-industrial civil servants' pay.

No more, no less

The application of that must be subject to any form of Government pay policy, whether or not it had been agreed with the unions.

Under recent years of pay control, civil servants had received no more and no less than they had been entitled to, said Mr. Morris.

Dons end ban

THE Association of University Teachers yesterday called off its threat not to mark final examination papers of university students. The move followed settlement of a pay dispute with the Government.

Plea on Press disputes

By Our Labour Correspondent

NEWSAGENTS ASKED the Government yesterday to outlaw unofficial union action which disrupted newspaper production or distribution.

The 350 delegates to the National Federation of Newsagents' annual conference, which began in Bournemouth yesterday, unanimously passed an emergency resolution calling on the Government to introduce laws safeguarding newspaper supplies.

Two weeks ago the newsagents held a protest march in Fleet Street. They believe continuing disruption in the industry affects their relationship with customers, and puts their livelihood at risk.

Mr. John Shorrocks, the federation president, said disruption of newspaper supplies appeared a direct result of "the near breakdown in labour relations between the established printing unions and their employers."

● Sporting Life, the first Fleet Street paper to use new printing techniques involving computer typesetting, was not published yesterday because of "complex problems" in these methods.

● Leaders of the National Union of Journalists expect to meet management representatives of Thomson Regional Newspapers to-day in a further attempt to solve a dispute over productivity pay and the dismissal of about 350 journalists more than a week ago.

Civil Service union moves to the Left

BY PHILIP BASSETT, LABOUR STAFF, IN BRIGHTON

THE CIVIL and Public Services Association, Britain's biggest Civil Service union, moved markedly to the Left yesterday, when it rejected the Right-wing candidate, Mrs. Kate Losinska, as both its president and vice-president.

The post of president carries prestige but little power. But the vice-presidential election result is seen as a positive pointer to a Left-ward swing in the union's executive election, to be held on Thursday.

The executive is at present split 15-11 in favour of the moderates.

At the union's annual conference here, Mrs. Losinska was defeated in the presidential election for the third year in succession by Mr. Len Lever, who stood on no political ticket.

Mrs. Losinska, one of the two vice-presidents standing for election, was also defeated in the poll for vice-president by a broad Left candidate and a Communist Party member.

She said she was surprised at the drop in her vote for the presidency, from 95,822 in 1977 to 66,420 this year.

Mr. Peter Colman, the far-Left presidential candidate, who is a Communist Party member, polled 37,059 votes.

The Left Labour slice of the 30,000 broad Left vote seemed to have moved to Mr. Lever to prevent Mrs. Losinska from being elected.

Mr. Colman polled 97,838 votes in the vice-presidential election, with Mr. Reg Williams, the

broad Left candidate, polling 132,811.

Last year Mr. Williams and Mrs. Losinska won substantially, with no other contenders even close.

Mr. Lever polled 103,622 votes in the presidential election, marginally more than the far Left and Right-wing candidates together.

In his presidential address, he attacked the idea of a Phase Four incomes policy. The first three phases of pay policy were "a compound of expediency and panic," he said, and were "an unwarranted interference into free wage-bargaining."

Settlements

On pay, Mr. Ken Thomas, general secretary of the union, said that the outstanding balance of Civil Service pay must be paid in 1979, and must be supplemented by settlements within the 12 months, from this year's settlement date.

The Left suffered a defeat, however, in the conference's rejection of a motion calling for withdrawal from the pay research system, which determines civil service pay by comparison with the private sector.

The conference backed a motion calling for full implementation of pay research unit findings for the 1978 pay settlement.

It also backed an emergency motion delaying acceptance of the Government's Phase Three 10 per cent deal until it is applied as normal to the union's controlled fringe bodies.

Be alert for Tory attacks—Scanlon

BY ALAN PIKE, LABOUR CORRESPONDENT, IN WORTHING

MR. HUGH SCANLON, whose union spearheaded the resistance to the legal provisions of the Conservatives' industrial relations legislation, yesterday warned trade unionists to remain alert to future attacks from the same source.

It seemed, he said in his presidential address to the Amalgamated Union of Engineering Workers conference here, that "when the Conservative Party was bereft of Government policy, it turned its attention to 'union bashing' and

immigration. Both had been overplayed.

"As a union, we suffered too much and too long under the last Tory Industrial Relations Act," he said. Trade unions must remain as alert as ever to ensure that they did not operate under a government licence.

Referring to Mrs. Thatcher's weekend remarks about trade union power, Mr. Scanlon said it was a reminder to all what was likely to happen if the electorate here, that "when the Conservative Party was bereft of Government policy, it turned its attention to 'union bashing' and

Militant action possible by milk tanker drivers

BY PAULINE CLARK, LABOUR STAFF

UNION LEADERS for 6,000 milk tanker drivers plan to take a militant stance over their pay negotiations if employers refuse to grant an increase above the Government's pay guidelines.

Some union officials are talking about prolonged industrial action.

Pay talks affecting 65,000 workers employed by members of the Dairy Trades Federation are due to resume to-morrow.

But Mr. Jack Ashwell, national secretary in the Transport and General Workers Union, plans to pull the drivers out of the negotiations if they are not given parity with lorry drivers in other industries.

A 10 per cent pay rise, the unions claim, would mean an increase of about £7.30 on basic rates, but the drivers are standing out for at least £2 more, amounting to a total 15 per cent claim.

The union leaders, noting their success last autumn in achieving wage rises above the Government's 10 per cent guidelines for lorry drivers employed in the West Midlands, are threatening to revert to local negotiations for milk tanker drivers as well.

Mr. Ashwell said he was arguing for parity with common carriers under the Road Traffic Act, 1938 — a claim which the employers' side is understood to have resisted as inappropriate to national pay negotiations.

If the union carries out its threat to withdraw from national negotiations, it will undoubtedly raise the question of how far the Government is likely to place sanctions on local employers who concede to the drivers' claims.

The Milk Marketing Board is among the employers and would be expected to stick firmly within the Government's rules.

After a reorganisation of the milk industry negotiating structure earlier this year, the drivers' leaders are bargaining on the Federation's national joint council, while employees in milk processing and milk products manufacturing are represented on separate committees.

Trades unions in the industry have asked for "substantial" pay increases. But, apart from the drivers, they are expected to accept a within Government guidelines settlement.

They called a lay delegate conference on April 26 when an earlier offer was sent back for renegotiation.

Post Office reopens talks with engineers

BY JOHN LLOYD

TALKS BETWEEN the Post Office Engineering Union and the Post Office on the union's demand for a 35-hour week have been re-opened, following meetings between Mr. Brian Stanley, the union's general secretary, and Mr. Eric Varley, Industry Secretary.

The union wants to take a proposal of some kind to its conference early next month. So far the Post Office has not indicated that it will compromise on any working week shorter than the present 40 hours.

The union, however, thinks it possible that agreement might be reached on introducing a shorter week in the near future. It does not want negotiations on hours to interfere with its annual pay claim, which comes up in July.

Officials point to the settlement on reduced hours agreed recently with the nurses and midwives as a possible precedent.

Channel pilots' dispute threatens hovercraft

THE WORLD'S biggest hovercraft, the 300-ton Princess Anne, may be left idle at the end of its present trials because of a pay dispute involving hovercraft pilots.

The Princess Anne is due to enter service with the British Rail subsidiary, Seaspeed, in July. But pilots are refusing to operate the new craft.

They also claim that summer services from Dover to Calais and Boulogne will have to be cut drastically because of their pay dispute.

The pilots claim they have fallen 25 to 32 per cent behind ships' officers, with whom they achieved pay parity in 1975, and

that negotiations have broken down.

They are threatening to work to contract, which will affect the frequency of Seaspeed's cross-Channel service this summer.

The pilots claim that the Princess Anne's sea trials are being conducted largely by manly.

When the trials are over the craft may have to be mothballed at the new £12m hoverport at Dover or returned to the builders' yard at Cowes.

The pilots are asking MPs to press Mr. Peter Parker, the chairman of British Rail, for an inquiry into Seaspeed's industrial relations.

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THE JOBS COLUMN

Two-way stress on the manager's sanity

BY MICHAEL DIXON

ONE PERSON'S challenge is ago by the late lamented another person's pressure, that National Institute for Industrial person's pressure is somebody Psychology, who spent all day else's stress, and that person's every day inserting at a stress may be my breaking bewildering speed those little cork discs which one used to find at the tops of toothpaste tubes. Yet she not only did the work well, but enjoyed it.

That sequence was quoted the other day at a session of the Institute of Personnel Management's London conference, in which John Morris, Professor of Management Development at the Manchester Business School, was taking about coping with stress at work.

The quotation—produced by a speaker from the floor of the hall—challenges the notion that stress, particularly in jobs of the managerial type, is an objective phenomenon with the corollary that the greater degree of it a person can put up with, the better a manager he or she must be. This is evidently still a widely held idea, even though it takes but a little searching of one's own experience to find evidence that the opposite is the more true, and that what is stressful depends to an important extent on the human being in the case.

I doubt, for instance, that most readers could stand for at all long the job of a woman, interviewed some time

for longer, but will also take away the external "proof" that one is winning—which in my experience is enough to make the intolerable of the moment feel like mere pressure.

But John Morris's advice was not to defend by taking an advanced course in Yoga or some other aid to just bearing it, with or without grinning. "If you accept the contradictions in your situation and turn them into rules of conduct, then all you have is self-imposed stress," he said. "We already have a world where the development of self-imposed stress is viewed by organisations as normal adaptation to circumstances. Much more of that, and we'll have a society where paranoia is functional."

Negotiate

His prescription to managers whose job conditions were facing them with the threat of stress was to seek to negotiate a change in those conditions with the people above, to either side of, and below them. "The threat may be in the situation; but you can't communicate effectively with situations—only with people. Talk!"

Beyond this, he had a prescription for senior management which, unlike subordinates, have real discretion to change the organisations below them.

The work of senior management generally he described as "pulling things together." The work done below could be divided into three main kinds: "doing new things," and "keeping things going," and "coping with failure."

Not long ago even in big concerns, the Professor said, almost every manager's job included some activity falling into each of these categories. But to-day, although very few managers still did any one type of work exclusively, the three kinds were being split up between different roles "and handed over to graduates of apparently ever-increasing aptitude and ineptitude at the same time—aptitude in the thing in which they have specialised, and ineptitude in everything else."

His advice to senior managers was therefore to resist this divagation and try to make sure that their concern's managerial jobs offered some opportunity up to its consequences. "They should be put in prison waiting

to be shot. Then we would know whether they were really willing to espouse the cause of conflict."

Hear, hear!

Code-again

AS A FOOTNOTE, it looks as though a number of readers are interpreting this column's recent silence on the topic of the proposed code of good recruitment practice, as a sign that I have forgotten about it. And while some think that oblivion would be the best destination for the proposal, the majority take the opposite view. The fact is that the code is far from forgotten. I have lately been going through comments sent directly to the Institute of Personnel Management by its members, while like those sent to me, raise some knotty points.

Although I have still to discuss these with the IPM with the object of drawing up the code which it will sponsor, one thing is certain. The final version of the code will have to be ready by the institute's annual conference in Harrogate this autumn, because I have to give a talk about it there.

There are still executives who refuse to believe it—who think that conflict is the name of the managerial game. But people who insist on believing that ought to be made to face up to its consequences. They should be put in prison waiting

to be shot. Then we would know whether they were really willing to espouse the cause of conflict."

Hear, hear!

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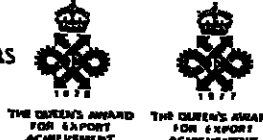
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A second appointment will be for a man or woman with wide practical experience in industrial and commercial enterprises who has the analytical skills to expose business problems and the presence to motivate management towards their resolution. The successful applicant may be based in the Midlands and will be looking forward to a salary approaching £10,000.



Applicants should write in complete confidence to the Managing Director, MLH Consultants Ltd., 148/150 Grosvenor Road, London SW1V 3JY, with relevant details of career to date including current salary.

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Applications should be sent with a curriculum vitae to:

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Fielding, Newson-Smith & Co.,
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Financial Times Tuesday May 9 1978

Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOTERS

MACHINE TOOLS

Dialling for the finished product

COLD-ROLLED formed sections are usually produced cut to length and any holes, slots, etc., require a second operation, often performed on a press brake with multiple tooling.

In order to introduce flexibility, eliminate second operations and reduce handling, numerical control has been applied to the Odin cold roll forming plant so that lengths, holes, notches, etc., can be programmed to produce a finished product.

A complete line for continuous production of a cold rolled section with press-formed ends has recently been installed. This

particular plant enables any length of component and quantity of that length to be programmed merely by setting dials. Programming can proceed while the plant is producing, giving uninterrupted production, and ten programmes can be set at one time, the plant producing the required lengths in batches.

Any length up to 10,000mm in increments of 1mm and batches of 1 to 1,000 can be programmed merely by setting digital counter dials.

Further details from Odin Engineering, Bodmin Road, Wyken, Coventry, CV3 6LS.

Milling head takes heavy loading

DESIGN of a new adjustable milling head, the "Novamill," by Iscar of Nahariya, Israel, has resulted in a more accurate and more easily handled tool. Used in combination with Iscar's IC50M hardmetal formulation, it works particularly well under high loads.

Iscar's main departure from current practice was to divide the pockets—the movable parts of the head that accept the inserts—into two elements. One of these is a low-cost, simple but very hard shim, which the other acts as secure seat for the cutting insert. The precise positioning of the insert in the seat is assured by a three-point seating system.

Should the tool be subjected to exceptional shock, in the course of the work process, that is first of all absorbed by the replaceable insert, and then by the shim.

The new design has made alignment a relatively simple task, and one that does not need to be repeated every time an insert is replaced. The same head can be used with either 4 or 8 inch inserts, whichever is handled by most machine operators.

Iscar's new milling head has floating set screws, to hold the inserts simply against the three-point seat, and round wedges with a single flat surface facing the pocket assembly. This adds a self-aligning feature that reduces set-up time and distributes the load uniformly along the entire length of the insert's leading edge.

MATERIALS

Hard finish for floors

FOR INTERNAL use only, and suggested for industrial applications where there is considerable wheeled traffic, or where improved working conditions are required in modern or rehabilitated premises, is the National Flooring Company's system, Stabaphalt.

The material may be applied over low grade concrete without any joints in new work, or over existing floor finishes for rehabilitation work and the system is said to provide a dust free, jointless, hardwearing floor finish that is quiet and warm to use.

Developed originally in the Netherlands by Cindu Key and Kramers, NV, the flooring is a composition of Stabaphalt and routine maintenance is bitumen emulsion, cement, crushed rock aggregate and sand without additional water.

It is said to be cheaper than mastic asphalt finishes or the overall cost of granolithic flooring, and has characteristics midway between these materials, therefore achieving the good balance of properties required for industrial flooring.

A life expectancy of 25 years is promised, with minimal maintenance, and constant wheeled traffic maintains the surface, healing any hair cracks arising from minor movement or shrinkage. It can be washed down with mild detergents which are suitable for concrete (damaged by acids). Areas may be easily repaired.

More on 01-353 7051.

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The Belcon service to industry offers the design, manufacture and erection of precast concrete, structural steel or composite frames in Single, Double and Three storey construction. Brochures and details of the Belcon service from:

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Bell & Webster (Steel Structures) Limited, Salt House Rd, Birmmills Ind Estate, Northampton NN4 0ED. Tel 0604 65211. Telex 311254.

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TURNOVER FOR THE FIRST THREE MONTHS OF 1978

For the first three months of 1978, pre-tax sales amounted to Frs.405.3 million as against Frs.375.7 million for the first three months of 1977, an increase of 7.8%. Exports represented Frs.256.8 million or 63.8% of total sales, an increase of 16.8% compared with the previous financial year.

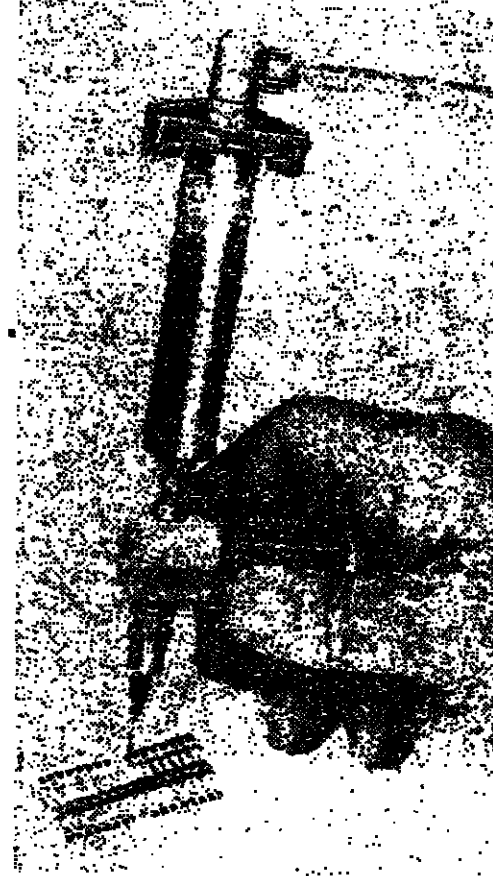
Consolidated turnover for the first three months of 1978, including the turnover achieved by the American subsidiary, totalled Frs.438.8 million as against Frs.408.9 million in 1977, an increase of 7.3%.

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COMPUTERS

Terminals at Cadbury Schweppes

HARRIS Systems has brought off something of a coup at Cadbury Schweppes with the announcement of an order for over 300 interactive display terminals worth £3m.

Over 40 distribution depots and 14 factories are involved some of which will have as many as ten terminals. These will be linked to a dual IBM 370/158 mainframe machine at the company's headquarters in Bourneville.

The terminals will be used mainly for telephone sales activity at the depots. Publicans, hoteliers and store managers give their number to the telephone operator who keys it into the system and within a few seconds has the customer's full name, address and the last six orders he has placed, on the screen.

Ordering assistance can be given, and once the new order is keyed in, the depot printer produces a delivery note and updates the mainframe file for stock control and invoicing purposes.

The delivery notes are made up into loads which are subsequently re-entered on another terminal for load/weight calculations, daily summaries and sales analysis. A further four terminals at Bourneville, operating on a time sharing basis to the IBM machine are used for budget planning, period accounts, and long range planning.

CONSTRUCTION

Seeks out resonance

AN instrument known as a vibratory mobility meter has been put on the market by IBD Mechanical of Chester and is intended mainly for investigatory work on metal structures.

Object of the device is to apply an oscillatory force to a specific point on a structure and measure the mobility—defined as the ratio of velocity to force. The result is continuously plotted on a chart recorder so that, as the frequency passes through a critical value the resonance will be shown as a peak on the trace.

A controlled sinusoidal force is applied by means of a hand-held electromagnetic vibration generator and the resultant motion measured by means of an associated accelerometer. The velocity signal is filtered to remove noise and harmonics, allowing very small velocities to be sensed.

Apart from looking for resonances in bridges, lattice towers, oil rigs and similar fabrications, the equipment should also prove useful in the dynamic and non-destructive testing of car transmission systems, bodies and other components of aircraft engines and airframes and of many other items fabricated from metal. Applications are also expected in the building and civil engineering industry.

More from the company at 27 Newgate Street, Chester CH1 1DE (0244 317557).

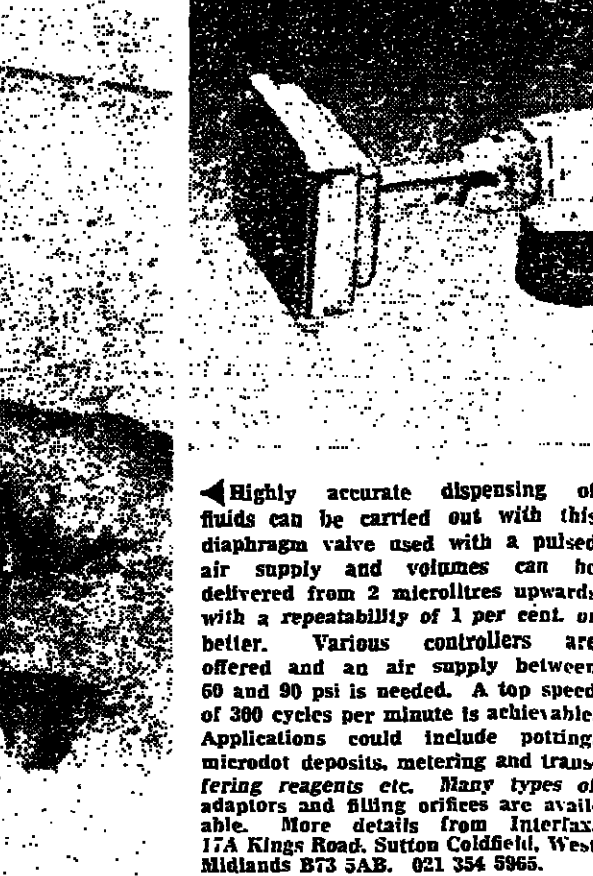
SHIPPING

Aids safe mooring

STRAINSTALL of Denmark Road, Cowes, Isle of Wight, has acquired all British and foreign patent rights in the Alongside Mooring-Load Monitoring System for very large oil tankers.

The system, which was invented by George Elliott of the National Engineering Laboratory, makes use of transducers fitted into the mooring points on a jetty. These points, normally hooks or pulleys suitably modified so that the total load on the mooring lines is transmitted through the transducers, are connected by cable to a console on which all loads are displayed in a suitable format.

Audio and visual alarms can be preset at the desired load limit, and the efficiency of mooring patterns is thus under continuous scrutiny, allowing rapid action in the event of an overload. Strainstall has developed a variation of the system for use with single-point moorings.



SAFETY

Signals state of alarm

DEVELOPED by GE-Elliott Electronic Systems is a 19-inch rack-mounted module for use in process control alarm and shut-down systems.

The unit can accept inputs from a wide range of detectors, either contact closure or 4 to 20 mA transducers, and produces outputs for alarm/control purposes.

Together with other units from the company's range, such as control action and facilities systems, a complete alarm arrangement can be built up.

The module contains only one board, with an optional daughter board if more alarm facilities are required. Each of the two channels is completely separate with its own power supply and

indicators and contact/indicators put on the market by Hartmann and Braun (U.K.).

The control panel space is only 144 by 36mm and most of this area is devoted to the display. Furthermore, the design of the housings is such that several instruments can be stacked together to create a line of scales on which the measured values of various kinds can be easily recognised and compared.

Current, voltage and resistance signals received from thermocouples, resistance thermometers and measuring transducers can be measured by the units. In addition, there are versions with inductive pick-ups which make it possible to signal the larger of two limit values. Millivolt indicators can also be supplied.

More from the company at Moulton Park, Northampton (Moulton Park 46311).

INSTRUMENTS

Indicator is compact

VISIBLE space occupied by the housing has been kept to a minimum in the Indicomp 3

COMPONENTS

Ultrasonic flow switch

PUT on the market by Bestobell Waterflow of Baldock is an ultrasonic flowswitch using doppler velocity measuring technique which is able to signal alarm conditions for velocities between 0.2 and 15 metres/sec.

Most fluids can be measured provided that they contain discontinuities such as bubbles or particles—the doppler frequency shift can even be measured from the interfaces due to turbulence in the flow.

A certain amount of logic is associated with the circuits that follow the sensor. For example, there is a hold-on timer adjustable up to 60 seconds so that the pump will not cut out on "low" alarm before full velocity has been established. Also, the final relay can be made to drop out for up to 60 seconds to allow pump changeover and prevent relay chatter when flow fluctuations occur. In addition, pump restart facilities are provided should a mains failure be experienced.

The unit can be set for "flow fail" or "excess flow" relay cut-out, and by adding modules either condition (and intermediate ones) can be signalled. More about the DS1/DS2 range on 0462 82222.

calibrated 0 to 100 and a stop/run switch.

Either speed or torque can be chosen to give closed loop control; in the latter case the motor current is controlled for torque/tension applications. Feedback can be obtained by sensing the motor armature voltage or by means of a tachometer.

More from the company on 09064 21311.

No leaks from the gutter

A JOINING seal to ensure a completely leak-proof gutter joint is incorporated in an improved version of the Hunter Squarelli UPVC rainwater system, the company reports.

The redesigning of its gutter joining brackets means that they are now held captive in specially shaped recesses, instead of the Neoprene strips used to form the seal before fixed by an adhesive. Strips are firmly held in place under all conditions, including tough treatment during handling and installation, and should now accommodate the daily expansion and contraction of the gutter without disturbances to the seal.

The system comprises 4 inch angled box section gutters and 2 inch square section downpipes; the gutter profile has a cross sectional area of 8.23 square inches which gives 30 per cent more effective flow capacity than 4 inch nominal half round profiles, and 20 per cent greater carrying capacity than most similar shaped gutter sections.

Available colours are grey, white and black and the company says the system provides a particularly elegant and effective addition to period style developments.

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The disobedient civil servant

BY DAVID CHURCHILL

ONE MAN'S fight against bureaucracy is an interesting but not unique story; but the saga assumes a new significance when that man is a former senior civil servant who has proved himself capable of exposing overmanaging and waste in the civil service, quit his job when his superiors blocked the extension of his cost-cutting regime, and then allegedly found himself facing a Whitehall cover-up.

In the past few weeks the Government has admitted that in 1974 senior civil servants misinformed the Parliamentary Public Accounts Committee which was investigating waste in the civil service. As a result of this, the author of a book published today, claims the MPs did not pursue their investigation into why certain cost-saving measures had not been widely adopted. And potential savings to the taxpayer running into tens, if not hundreds, of millions were lost.

It may not exactly be a Watergate, but there is certainly a suspicion of a "Whitehall behind closed doors."

The man single-handedly responsible for creating this furore is 58-year old Mr. Leslie Chapman whose book charting his crusade against the civil service is published today. Mr. Chapman has spent most of the 1970's trying to persuade his superiors, then Parliament, and now the public that there is ample further scope for efficiently pruning the cost of running the civil service.

Not surprisingly, Mr. Chapman's policy did not endear himself to his senior colleagues in the service. Few people within any organisation are prepared to admit that they waste money and civil servants are no exception.

Yet that is exactly what Mr. Chapman describes in his book as happening. And, moreover, he proved that it was possible to cut out this wastage without impairing efficiency.

Leslie Chapman joined the Civil Service in 1933 as a 20-year old but it was not until 1967 that his story really begins. In that year, at age 47, he took over the job of regional director for the south of England in the Ministry of Public Buildings and Works. The Ministry has subsequently become the Property Services Agency. As regional director, Mr. Chapman was among the top 1,000 civil servants in the country and his

salary nowadays would have been in excess of £11,000.

The Southern Region of the Ministry was responsible for providing and maintaining all Government offices and buildings scattered over five counties, including Ministry of Defence installations. Mr. Chapman headed an organisation with about 5,700 employees and an annual budget of some £25m. at current prices. Part of his job was to liaise with the Treasury, the Exchequer and Audit Department, and other bodies—experience that was to prove invaluable later on.

But back in 1967 it was the job in hand that dominated Mr. Chapman's attention. Adopting the "new broom sweeps clean" management philosophy he initiated a fact-finding campaign of just what the civil servants in his control were doing.

Thus one afternoon in May 1967 Mr. Chapman paid a surprise visit to a defence depot near his headquarters. "I asked to see the records which showed how the directly employed labour force were deployed on that particular afternoon, what they were doing, and where they were doing it," he remembers.

He found that the bulk of the 70 employees present that day were doing nebulous "general maintenance work" which in fact in most cases "was nothing more than filling in time." The inescapable conclusion was that "the amount of waste and over-manning was greater than anyone had suspected." And, concluded Mr. Chapman, "something would have to be done quickly to put this right."

His solution was to establish teams of three investigators to probe intensively into one depot at a time. These investigators combed through every job and activity and produced suggestions for literally hundreds of potential savings. Many wasteful practices went back for 30 years or more, claims Mr. Chapman, and had survived several changes in management.

The savings resulted in surplus land being sold off and unwanted buildings demolished. Typical savings included such obvious measures as reducing the standard of heating and lighting in infrequently used buildings and stores.

One particular area of savings was achieved by ending the fleet of Government cars, supposedly for the use only of ministers and top civil servants,



Mr. Leslie Chapman—he quit his job after his schemes for saving money were not accepted.

but in fact mainly used by junior staff.

Overall Mr. Chapman's Southern Region halved the numbers of directly employed workers—in 2,000—and by December 1976 savings were running at about £12m. a year.

Mr. Chapman's achievements in pruning costs in his area are undisputed by all concerned. He determinedly carried out quite extensive cut-backs without harming operations or, as might have been expected, creating any industrial unrest.

It was in his subsequent attempts to get his ideas adopted by other regions that he is surrounded by controversy. In his book Mr. Chapman details the wholehearted support he received from three successive junior ministers in the Department. But he alleges that it was the officials surrounding these ministers and his contemporaries in other regions that effectively delayed and blocked the full implementation of his cost-cutting ideas.

As early as 1968 Mr. Chapman says that Lord Winterbottom, the Department's Parliamentary Secretary, told the other regional directors that he attached great importance to the cost-saving work being carried out in Southern Region and urged them to adopt similar schemes.

But, claims Mr. Chapman, "after he left the meeting it was clear that no one believed that economies on anything

tion and Establishments, the Number Two official in the Department of Environment as well as to Sir William Armstrong, the then head of the Civil Service. Neither response was to his satisfaction.

It was then that the Exchequer and Audit Department—the body responsible to Parliament for monitoring public expenditure—took an interest in the affair. They had previously interviewed Mr. Chapman and others about the savings being achieved in the Southern Region.

Subsequently, the Exchequer and Audit Department sent what is called an audit reference sheet to the Department of the Environment asking why out of £6.4m. saved by PSA in 1973, nearly half had come from the Southern Region. The matter was then published in the Comptroller and Auditor General's report to Parliament on the Appropriation Accounts.

This was followed by an investigation in April 1975 by the Public Accounts Committee, one of the most powerful select committees of MPs. However, the PAC's teeth were drawn by Sir Robert Cox, the PSA chief executive, who told the MPs in reply to questions that the Southern Region had been able to make substantial savings because of a large redeployment of troops from Aldershot, to the north.

However, this information—provided to Sir Robert by his officials—was untrue. Dr. John Gilbert, the present Minister of State for Defence, told the Commons recently: "No permanent transfers of major units from Aldershot took place during the period in question."

The unofficial explanation for this is that it was simply an error, compounded by the fact that the information required in 1975 went back over ten years. But the effect of the misinformation was that the PAC abandoned its probe into the reasons for Southern Region's success.

While this episode was unfortunate, it does not, however, prove there was any concerted attempt to cover up opposition to Mr. Chapman's ideas.

And though he was undoubtedly achieving economies in his area, the PSA has also published figures showing that other regions achieved considerable economies by other cost-saving techniques. There is a feeling in Whitehall that Mr. Chapman's attack was more inspired by a frustration at not getting his own view accepted than by any concerted attempt to curb his activities.

So, at the age of 54, Mr. Chapman felt his only option left was to seek voluntary early retirement. Before he left he compiled an extensive memorandum of his experiences which he sent to the Director-General of Organisa-

A FINANCIAL TIMES SURVEY ENERGY FOR INDUSTRY JUNE 14 1978

The Financial Times proposes to publish a Survey on Energy for Industry. The provisional editorial synopsis is set out below.

INTRODUCTION Britain's total annual energy bill is now running at over £16bn. Non-domestic consumers, including industry, commerce and transport, account for three-quarters of this total; industry alone consumes around £8.5bn. of fuel annually. A general introduction to industry's needs and how they could be affected by changing supplies and prices.

ENERGY PROVIDERS A detailed look at the prospects for various energy forms used by industry, with an assessment of future availability and possible pricing structures.

OIL This year North Sea oil should account for over half of Britain's crude oil consumption (in net terms). By 1980 the country should be self-sufficient in oil.

GAS Virtually all of Britain's gas now comes from the North Sea. The development of new fields has enabled the British Gas Corporation to market more aggressively. How long will gas supplies last?

COAL Britain's most abundant indigenous energy source, a fuel which will have an increasing role to play.

ELECTRICITY A critical look at the electricity supply industry now that some of the major questions regarding coal-fired stations and nuclear expansion are being answered.

SECONDARY POWER Companies on interruptible gas contracts must have stand-by energy facilities.

CONSERVATION There are now over 3,000 energy managers within British industry, an indication of the importance being attached to fuel management and conservation.

INSULATION The costs and benefits

GOOD HOUSEKEEPING More immediate methods of saving energy can be achieved through energy audits, lagging, the increased use of thermostats and time switches.

SAVE IT Some £10m. has been spent or allocated under the Government's energy conservation campaign. A critique of the campaign's objectives and success in relation to industry.

GOVERNMENT LESSON The Property Services Agency hopes that its multi-million pound programme will ultimately save 35 per cent. on its 1972 fuel bill.

INDUSTRY EXPERIENCE The following articles will look at the way the major energy using industries are facing up to higher prices. The articles will also review changes in hardware, management and conservation attitudes which have arisen as a result of price rises and the uncertainty of future supplies.

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Financial Times Tuesday May 9 1978
Covent Garden

Gwyneth Jones

by DAVID MURRAY

Gwyneth Jones gave her "first London recital" on Sunday night, odd though that sounds, but of course what brings her to the Royal Opera House is not normally Lieder. With Geoffrey Parsons at the piano she sang Schubert, Wolf, Berg and Brahms, all with full-throated commitment. It was, I think, the loudest Liederabend I have ever heard. Given the sheer size of her voice, and of the auditorium, Miss Jones had evidently decided not to impose unnatural constraints on herself: a reasonable enough decision, though Mr Parsons is not easily tempted out of his natural discretion. In Berg's rapturous Seven Early Songs, which suited Miss Jones splendidly, his careful tact was no substitute for the fervent abandon needed to match her.

Miss Jones exerts in whatever she does an operatic heroism at crisis-point—the effusive, intense, ecstatic Wolf's spring greeting "Er ist's" was Siegfried in full cry. Elsewhere her touch climactic notes were apt to spread (and she was recklessly liberal with them: there were several times as many as there were songs), the voice is seductive on a grand scale, and the thrust of each musical phrase is sharply defined. But the thrust of a whole song is more problematic: though Miss Jones seizes a general mood confidently, she lacks the means to shape songs of more complex and ambiguous feelings. Wolf's inspired setting of Mörike's "Im Frühling," for example, obstinately refused to come to life, despite any amount of facial acting-out.

In opera, Miss Jones can let her voice, and of the auditorium, Miss Jones had evidently decided not to impose unnatural constraints on herself: a reasonable enough decision, though Mr Parsons is not easily tempted out of his natural discretion. In Berg's rapturous Seven Early Songs, which suited Miss Jones splendidly, his careful tact was no substitute for the fervent abandon needed to match her.

Sadler's Wells

La Fille mal gardée

by CLEMENT CRISP

The young visitors to the Wells on Saturday afternoon had a splendid time. The scampering down to the rails of the orchestra pit in the intervals to inspect the musicians—and be it said that under Barry Wordsworth and Colin Metters, musical performance this season have been preferable to those obtaining at



Carl Myers and Marion Tait

the Opera House on ballet nights—and the response to the fun of the ballet was a baptism in fun. I liked very much Brian Bertscher's manner as Alain; he plays the simpaton without too knowing an air, and that radiant innocence that was Alexander Grant's is happily restored to the ballet.

£1,000 book award

Saturday's matinee was also a happy affair on stage, with Marion Tait as a sparky, naughty Lise, and Carl Myers attractively youthful as her Colas. This Lise is clearly a child of the old school of David Bintley's Widow Simone; there is the same bright resource in playing, and the same determination of character. It is exceptional to find an artist as young as Bintley making such sense of a travesty role, but he is, unsurprisingly, excellent. There is a snap to his performance, and also a clear feeling for the logic of the character, and something of the pleasure in the matter of travesty humour that can be seen in such outstanding Northern comedians as Les Dawson, and in an earlier generation Norman Evans. Bintley is a fine Simone, and will

"Unemployment" and the plight of the "unexpected teenager" are the subjects of unique book awards sponsored by the Odd Fellows M.U. Friendly Society. The judges of the Odd Fellows M.U. Social Concern Book Awards will be looking for the book or pamphlet which makes the most useful contribution to the finding of solutions for such of these problems.

The National Book League has announced the panel of judges as: Richard Hogart, John Maddox and Ann Hills. The announcement and presentation of the prize winners will be held at the Odd Fellows House, Manchester, on October 18.

MIND

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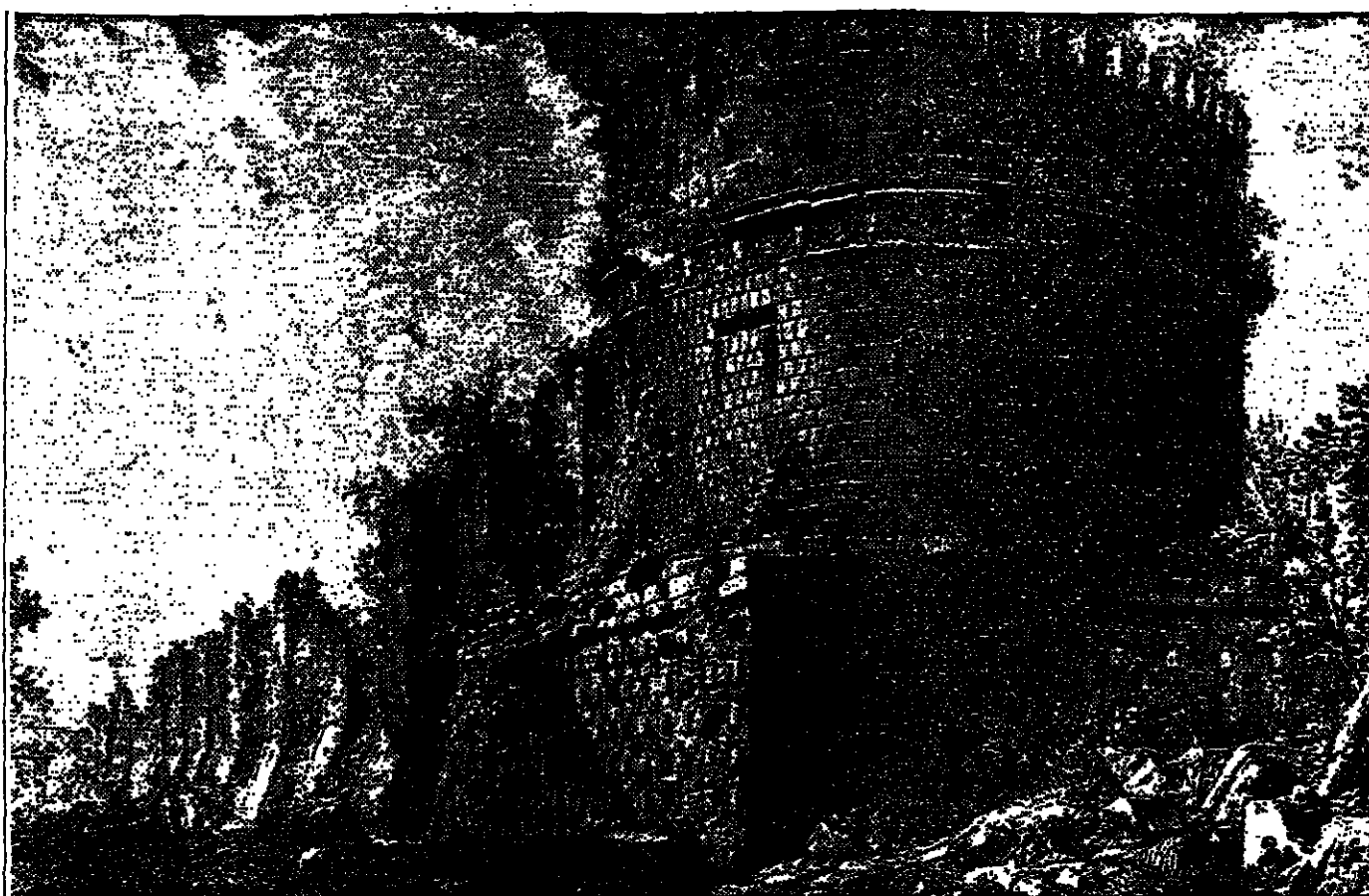
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Piranesi's 'View of the tomb of Cecilia Metella'

Hayward Gallery

The permanence of Piranesi

by DAVID PIPER, Director of the Ashmolean Museum, Oxford

Piranesi is a state of mind. He defined it in visual terms; even if his definition has been subject to varying interpretations since he was in his prime over 300 years ago, its validity has persisted. The state of mind is no doubt an enduring quality—or addiction—of the human condition. For example, one etching (No. 206) in the exhibition of his work now at the Hayward Gallery, seems a brief for some more architecturally orientated Dante reconstituting a section of the Inferno. The exhibition marks the bicentenary of Piranesi's death in 1778. It is far from the first, for Piranesi has been shown through Europe and America this century, but it is certainly the most searching to date. A Venetian, trained in Venice as an architect, his career was quintessentially Roman, and Rome from 1745 on provided the raw material and the inspiration for his visionary art. He was architect—though never with opportunity fully to exercise his talent as such: he was archaeologist both of learning and heated dogmatic opinion—polemicist, a designer of fireplaces, furniture, clocks, a collector, restorer, and dealer in antiquities. He had close English and Scots connections; they provided clients and also allies—his friendship with, and influence on, Robert Adam was profound. He was intractable, an indefatigable worker but very difficult to work with, and some of his visions suggest a state akin to madness, or to hashish or opium induced hallucination. (So de Quincey diagnosed; an implication now indignantly denied, but one nevertheless recognised by addicts as being peppered with good experience.) Oddly, the marble head of him here (by the then

young Englishman, Nollekens) has no manic aura at all, but seems the most solid senatorial image of a senior citizen of forceful yet sober authority. But Piranesi was, of prints. Prints were his livelihood for sale to the grand tourists (especially the British) the focus of whose travels was Rome, but prints was surely also his true vocation. His major themes were pursued consistently: themes of the grandeur and decay of antiquity, of transience and permanence, almost of the transience of permanence. The monuments of Roman antiquity are observed in drama (the influence of illusionist stage designers such as the Bibiena family persists)—a drama of light and shade that is informed even in his topographical work by far more than mere topographical accuracy. His scenes, as Horace Walpole noted long ago, "would startle geometry, and exhaust the Indies to realise. The detail in them is inexhaustible, and no less so in the purely imaginary visions, of which the most haunting, most famous, are of course the Carceri—the Prisons, hugely lofty in their glooming, yet formidably claustrophobic, strutted with ornate, dizzy stairways going powers laden with great iron rings, chains, pulleys; trapped by massive masonry and caged with bars, the sky an impossible aspiration above. These visions are both exhilarating and deeply disquieting. Indeed, think they are only bearable because though most real they are transfused by imagination: it's all in the mind. Their human inhabitants for example are never precisely characterised; they are just accents in the movement of the night time scene, really only shadows with no substance. It is only in his very

English Bach Festival

Rinaldo

by MAX LOPPERT

Contemporary music is getting a rather poorer showing at this year's English Bach Festival than in previous years; but in compensation Lina Landi has produced a splendid feast of pre-classical opera, with concert performances of Handel's *Rinaldo* and Vivaldi's *Griseida*, and a staging of Rameau's *Hippolyte et Aricie* scheduled for July. *Rinaldo*, given at the Queen's Theatre, Haymarket, in 1711, was the first of Handel's Italian operas for London. It is one of the richest musically, one of the most spectacular in effects (both in the instrumentation and in the stage directions) and, dramatically, one of the least. The work was produced in, and bears all the marks of, haste. As this matters seriously only in the opera house, where we would expect a degree of consistency in character development and lucidity in plot outline not to be found in Aaron Hill's clumsy reworking of Tasso, Handel's "anthology" of superb melodies (as Wilton Dean's programme note calls it) is well suited to concert rendition.

With reservations which will be duly noted below, the music was well served by Sunday's performance at the Elizabeth Hall. It was an "authentic" performance: the EBF Baroque Orchestra was playing period instruments at correct pitch. And playing them efficiently, apart from the probably inevitable squawking of the oboes, and apart from a perhaps less inevitable meagreness in the quantity of strings, in heroic numbers, such as Rinaldo's brilliant "Or la tromba," with its irruption of four trumpets, the string body was almost entirely obscured. Except for the sad loss of Almirena's "Augeletti che cantate," with its delicious accompaniment of three recorders, cuts were thoughtfully made.

The French Jean-Claude Malgoire, made on the whole a more convincing impression than in past London appearances; tempos were mostly aptly chosen and sustained with reasonable steadiness. Mr Malgoire tended to lose one's confidence in the vocal ornamentation of repeats, which was presumably of his inventing, and which veered stylistically from the wildly excessive to the wildly inappropriate. But it was all carried with enthusiasm by a good team of singers, among whom only Eiddwen Barry as the sorceress Armida—the single powerfully drawn character, in a vocal line demanding glitter, passion and dramatic power—suggested any theatrical excitement in her arias.

There was pure and tasteful singing from Marilyn Hill Smith (notably in a shapely account of Almirena's beautiful "Iscia ch'io piango"). Ian Caddy, and Paul Eswood in a confutation of minor roles. A source of interest was the South Bank debut of Carolyn Watkinson the young English contralto, in the title role (which she also takes in the Malgoire recording). The voice is warm and clear, rather soft-grained in projection for a castrato hero (though the line is always firm) and not unfavourably true of pitch; the personality is winningly candid and unaffected. The libretto was generously provided in the programme booklet; gratitude would have been unspotted if it had not been so clumsily laid out and borne such an uncertain relationship to what was actually performed.

NICHOLAS KENYON

Bennett premiere

The first London performance of Richard Rodney Bennett's *Spells*, a work for soprano soloist, choir and orchestra, will be given on Monday, May 15 at the Royal Festival Hall by the Bach Choir with the Philharmonia Orchestra conducted by Sir David Willcocks. The soloist will be Jane Manning.

May 1978

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Rainbow

Jethro Tull

by ANTONY THORNCROFT

Jethro Tull are the hardy annuals of British rock music. It has been ten years since Ian Anderson first took his flute to a concert to be backed by a band calling itself after an 18th century East Anglian agricultural reformer and on Sunday Jethro Tull reached London on yet another annual tour. Anderson is the only survivor from the original group but his latest music is as rural as anything from the last decade.

Anyone knowing Jethro Tull only from their rather unimpressive albums would have been cheered up by the Rainbow concert. Anderson himself is a witty front man who can enjoy himself at the expense of the band and the audience. The other musicians looked equally relaxed without getting sloppy. More to the point the length of the Jethro Tull repertoire ensures that they can present a varied act. Virtually every aspect of rock music, from the light acoustic to the heavy electric, from the lyrically fanciful to the over-pretensions, was on show on Sunday.

Anderson may not have the

best of voices but he dominates the band. The one legged posture while playing the flute is kept under control now and more use is made of his guitar. He is helped greatly by Barrie-More Barlow on drums and Martin Barre on electric guitar but all six seemed in good form. The only disappointment was the inevitable encore of Aqueduct, the band's theme tune, which was not attacked as vigorously as in the past.

The songs from the new album with its more "country" feel showed up well, especially Heavy Horses, which, with its variations in pace and "significant" lyrics, just about summed up ten years of Jethro Tull. The experiments of the past have sometimes pushed the band down blind and unfruitful alleys and have robbed them of a consistent and lively placeable role in British rock, but the combination of visual antics, wayward creativity, and a solid devotion to a strong rhythmic line, has brought them a large and devoted following. The applause at the end was happy and deserved for what was a very professionally produced, very genuine, rock concert.

Madisons

Gotham

Suddenly it is supper rooms. The success of Country Cousin, that long limb of gay fun round the corner of the Kings Road, has encouraged lots of others, most notably Madisons, handy for Hampstead at Camden Lock, where producer Bernard Jay, a refugee from Chelsea, is concentrating on the same kind of shimmering-under American act which made Country Cousin such a hit and a success.

Madisons opened with Gotham, which has impressed in the King's Road. Gotham is a trio of lads which mixes close harmony singing with some nice bitchiness about the audience. If you are sitting at the front, and are less soigné than Joan Crawford, your meal will be peppered with good natured insults. While they keep up the frenzied banter—"Is anyone here on downers?" We'll wait

A.T.

FINANCIAL TIMES

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Tuesday May 9 1978

Industrial costs up

THE wholesale price indices rose for the first time in a year, for March were published on the day before the Budget, and by so received comparatively little attention. They seemed, however, to reinforce the arguments for adopting a more cautious fiscal stance than the CBI or the TUC had recommended or than the Chancellor himself might have been willing to adopt only a few months before, when money was flooding into the official reserves. The Government intervened heavily in the foreign exchange market to brake the decline and to demonstrate that it regarded the present price of sterling (in terms of leading currencies in general rather than of the dollar alone) to be about right. This will help to reduce the rise in import costs, whatever happens to the world price of raw materials. But Government policy appears to be that the exchange rate should move roughly in line with the competitive position of U.K. exporters—that it should reflect the relative level of inflation in this country. In the process, it helps to set it.

Exchange rate

The best guess, on present evidence, is that the rate of year-on-year inflation reflected in the retail price index will drop further. But, these whole-sale price indices suggest that it will probably begin to rise again by the end of the year, with the actual rate of increase depending on what happens—sterling apart—to earnings in the next pay round. While the official aim of an average earnings increase of 7 per cent. looks decidedly optimistic, there are two opposite reasons for hoping that the outcome may not be disastrously larger than that. To the extent that the falling rate of inflation affects expectations about the future, claims in the first and decisive half of the next pay round should be moderated. To the extent that anxiety about inflation remains a major concern of those in work, an abnormally high savings ratio may make the financing of the public borrowing requirement easier than it would otherwise be.

Levelled out

While this looks more encouraging than the year-on-year comparison, the fact is that the six-months' rate of increase has remained at this same figure of 4.1 per cent. for five months in succession. It looks, in other words, as if the rate of inflation reflected in factory output prices has levelled out at a figure which is still too high. The behaviour of industrial costs for raw materials and fuel, which will affect first output and then retail prices—the whole process takes something between six and nine months to work through—is rather more discouraging. In March they

rose for the first time in a year, by 2 per cent. In April they turned out to have risen by another 2 per cent. The index for raw materials alone has risen by 4.1 per cent. in the past three months against a fall of 5.1 per cent. in the previous three months.

A large part of this increase during April, as during the previous month, was due to the depreciation of sterling. The Government intervened heavily in the foreign exchange market to brake the decline and to demonstrate that it regarded the present price of sterling (in terms of leading currencies in general rather than of the dollar alone) to be about right. This will help to reduce the rise in import costs, whatever happens to the world price of raw materials. But Government policy appears to be that the exchange rate should move roughly in line with the competitive position of U.K. exporters—that it should reflect the relative level of inflation in this country. In the process, it helps to set it.

The April indices show much the same picture and deserve to be examined carefully by those who are pressing the Chancellor to increase the borrowing requirement by more than he proposed. Factory output prices were then 10.2 per cent. higher than in April of last year, against a comparable figure of 11.3 per cent. in March. If the more recent trend is measured by looking at the rise over the past half-year, however, the increase turns out to have been 4.1 per cent.

The IMF calls the tune

THE PAST few years have seen a steady growth in the influence of the International Monetary Fund as the world's economic arbiter. A major factor has been the vastly increased need for finance by deficit countries in the wake of the quadrupling of oil prices in 1973-74. As Dr. Johannes Witteveen, the Fund's outgoing Managing Director, pointed out in London yesterday, the current account deficits of non-oil developing countries have recently been running at a level over three times higher than in the period leading up to the oil crisis. The share of assistance provided by the Fund, though still much less than that supplied by commercial banks, has doubled over the past five years.

Conditions

But it is not simply the increasing scale of IMF lending that has strengthened its role. It has now become common practice for Governments and private banks to make offers of credit dependent on a deficit country first negotiating a Fund loan and accepting the accompanying economic policy conditions. In recent weeks Portugal has unlocked \$800m. worth of Western Government credit by successfully negotiating terms with the IMF. Peru, on the other hand, has seen its hopes of a \$260m. commercial bank loan dashed by IMF disapproval of its economic policies. It is not just over the use of its own resources that the Fund's decision is becoming increasingly final.

As Dr. Witteveen acknowledged yesterday, the growth of the Fund's influence has led it into increasing controversy—particularly over "conditionality," which is especially unpopular with developing countries. Critics have accused the Fund of obstructing growth by putting too much emphasis on demand restraint; exaggerating the importance of the price mechanism; recommending exchange rate changes much too readily and trying to push through adjustment processes too rapidly. More generally, the Fund's intervention is likely to arouse fears in each section of society that may have to bear the brunt of the prescribed austerity policies.

Dr. Witteveen has detailed answers to all these charges, some of which he accepts as not

Unrealistic

It is unrealistic to expect the rich countries, which provide the money, to give up a predominant say over the uses to which it is put. "Conditionality," in one form or another, is probably here to stay. But there is certainly scope in the North-South dialogue for exploring the special needs of the developing countries in more depth. If the dialogue succeeded in creating an atmosphere of greater mutual trust, it might be easier in future for developing countries to seek help before they reached the brink of disaster. Then the remedies prescribed might not have to be so immediate or so severe. That should help to improve the Fund's image in the Third World. For their part, developing countries should appreciate that there is not necessarily any stigma attached to seeking outside advice when in financial difficulty.

'With new communications technology, the Post Office will become caught up in areas from which it has previously been independent'

Post Office entering uncharted territory

BY JOHN LLOYD

THE NEW chairman of the Post Office, Sir William Barlow, has had a good first six months. A much more public man than his predecessor, Sir William Ryland, he has reaped early benefits in popularity from getting round the regions, pumping hands and peering at machinery.

He has been helped by the fact that the usual criticisms of the Post Office attract as the nationalised industry with the most exposure to the public has recently been transferred to British Leyland and the BSC. More positively, Sir William has reversed the Ryland practice of holding power centrally, and devolved it rapidly to the managements of the three Post Office businesses—Posts, Telecommunications and Giro. He had little choice: the complexities are such that no outsider to the Corporation could, even if he wished to, match Ryland's grasp of detail. But the initial effects seem good.

The heads of the three businesses are themselves all new appointments. The youngest—in years and experience—is Mr. Peter Benton, managing director of the telecommunications business, recruited from Gallagher's engineering division and at his post since January. The brevity of his service makes him the most difficult to assess; but it is clear that he has already hastened along the much-delayed "System X" project to the point where it is being confidently predicted that the U.K. will have its first fully electronic, digital exchanges by 1981; and that the rest of the world will have a chance to buy them a year or two afterwards.

In Giro, Mr. Sam Wainwright, who came in last year from Rea Brothers merchant bank, has quickly expanded the service to take deposit facilities with a 1 per cent. interest rate edge over the clearing banks, and is now poised to make substantial inroads into that 40 per cent. of the adult population which is "unbanked."

Post should be the Cinderella of the three. Its managing director, Mr. Denis Roberts, appointed last year from within the Corporation, was, at the age of 63, widely regarded as a stop gap appointment. But he refuses to behave like one; he has turned the chronically unprofitable parcel service round to near-break-even, overseas mail is showing a ten per cent. growth in letters and a four per cent. growth in parcels, and even the inland letter service has—by the moment—ceased to decline.

All the businesses will

declare a profit on the past financial year: internal estimates suggest that Telecommunications will come out around £280m., Post at around £30m. and Giro at around £2m., which would seem to achieve the happy result of avoiding both accusations of inefficiency and charges of excess.

Yet all honeymoons come to an end and Sir William Barlow will be faced with a formidable array of Post Office problems in the near future. What follows is a provisional list of some of the more significant ones.

The Government: It is about nine months now since the Post Office Review Committee (Carter Committee) presented its report. It called for greater efficiency and courtesy, an advisory council on communications, and a split in the Corporation between Posts and Telecommunications. To a significant extent—as enthusiasts for

Thus if the Government agrees to the split, it will go against what it believes to be right, and also a very powerful union. If it does not, it will offend the Board, and an equally powerful union.

On balance, it seems unlikely that the Government will act against its own judgment. Splitting the Corporation now would mean disrupting the experiment in industrial democracy, which runs from the Board down to the local areas, and is still in its infancy. Such a decision will not, of course, make the pro-splitting lobby go away. It will continue to argue that, as the businesses grow ever more complex, their top managements should be divorced to allow them to concentrate exclusively on their own problems.

Posts: Mr. Denis Roberts' undoubted success has been achieved in part because he has accepted, stoically, that his

linked to telephones—is probably at least a decade away. But Viewdata, which will bring a mass of information into every home with a TV set, will soon be on the market, greatly reducing the need for such information to be sent by mail.

System X: The electronic digital switching system is being hastened on stream with a greater sense of urgency than before but that urgency cannot disguise the fact that the U.K. has been, and is still, comparatively uncompetitive in the booming telecommunications export market. That in turn derives very largely from the policies pursued both by the Post Office and by its three main suppliers, GEC, Plessey and STC.

The three suppliers still do not, as the Carter Committee put it, "make a natural team." Yet they will be offering, jointly, a system which requires constant co-operation, because



DENIS ROBERTS

... turn-round for the postal service

SAM WAINWRIGHT

... expansion of the Giro Service

SIR WILLIAM BARLOW

... all honeymoons come to an end

Carter admit—the Post Office has shown itself willing to learn efficiency and even manners—a Code of Conduct, a pledge to be nice to its customers, is under serious consideration. Neither the Corporation nor the Government however wants an advisory council coming between them, so it seems unlikely to come to anything. But the proposed split between Posts and Telecommunications might yet cause some grief.

Besides Mr. Carter and his committee, those backing the split include most of the present Board and the Post Office Engineering Union, on grounds of industrial efficiency. Those against include Mr. Gerald Kaufman, the Industry Minister with responsibility for the public sector. Mr. Eric Varley, the Industry Secretary, and the Union of Post Office Workers.

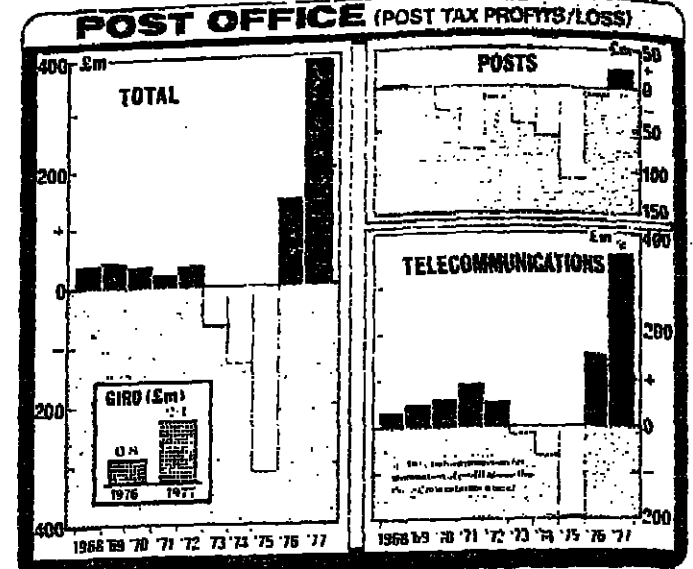
business must run very hard indeed to stay in the same place and that, in the longer term, decline is inevitable. The challenge of the electronic message—carrying technology from the telecommunications business can be coped with for some years yet, but much of telecommunications' future actually depends on replacing some of Posts' services.

Managing that decline, then, becomes the central problem for the postal business in the 1980s. The management has been fortunate in dealing with a union—the UPW—which has proved itself relatively cooperative in the matter of redundancies, but if unemployment rises generally, that co-operation will not be automatic.

Electronic mail—which would enable letters to be transmitted and received on keyboards

the Post Office has broken up the development of the various elements of the system among them (though they will each eventually market the whole system) by the fact that System X is composed of a number of semi-independent, interlocking modules. It remains to be seen whether or not the companies can co-operate in an exceptionally tough market, now worth around £3bn. a year and expanding by 10 per cent. annually: the signs are still far from good.

Communications policy: the question of the nature and purpose of the country's communications in the future is to a large extent the key to all the problems above, but is the most difficult to define precisely because there is no agency which has defined it. However,



It is not difficult to compile a provisional list of the elements which would have to be considered in the adumbration of such a policy.

There is a considerable range of equipment now being developed by the Post Office and its main suppliers, of which Viewdata is the best known. Others include Confravision, where conferences can take place between two groups of people in different centres by means of closed circuit television; Viewphone, its individual equivalent; the remote control of plant and machinery; Telemail, the electronic transmission of letters via phone lines. Decisions must be made about when these media are to be brought on stream.

Attendant on these decisions is the definition of a "post electronic" role for the postal services, that is, how far and at what level and cost they should be retained.

Also closely related to decisions on the timing of the new media are the demands of the exports markets, and the ability of the Post Office and the suppliers to harmonise these with domestic needs and constraints.

It is inevitable that the development of these new systems will reduce the need for labour. How this fact is to be coped with is of great concern not simply to the Post Office but also—since it is the U.K.'s largest employer of labour—to the country at large. The Corporation's policy will thus be a major part of general decisions on employment policy in a period when technology will increasingly replace labour—the more so since the Post Office is a leader in precisely that field.

As the television screen which most homes possess progressively ceases to be merely the receiver of entertainment and information provided by public and private television contractors, and becomes a computerised information terminal, possibly part of a Viewphone system, more futuristically still a two-way shopping, bill-paying and even voting device, then the line between the Post Office and the TV contractors will be a difficult one to draw. All will be drawn in, together with the Government, into making decisions on general communications policy, and more importantly on the increasingly profound effect such a policy will have on the country's productive forces and the lives of its citizens.

In the view of Professor Daniel Bell, the American

sociologist, the next decades will show clearly that advanced societies are now more dependent on the communication of fact and of expertise than they are on labour. To the two elements of land (as the basis for food) and metals (as the basis for tools and weapons) which have been the poles of social organisation, he adds, for modern times, the third pole of information. On this argument, communications will become the key industry of the future.

That view is still contentious but it is no longer merely science fiction. (Bell was put in charge of the Presidential "Committee of the Year 2000," and his recent work is carefully read by executives in companies like I.T.T. and IBM.) What is not contentious is that the expansion of communications in the next decades will be enormous.

A recent report by two Cambridge economists, Mr. Francis Cripps and Mr. Wynne Godley, chose to highlight both this problem and that of the reduced need for manpower, and to question the ability of the Post Office adequately to control the developments of the next decade. The report recommended the establishment of an independent council with powers to elaborate a communications policy, thereby taking a step further, the central proposal in the Carter Committee's report for an advisory communications council. Since Carter's argument has not persuaded either Post Office or Government, there is less chance of the Cripps/Godley one doing so.

In a letter to the "Financial Times," Mr. Peter Benton argued that the report was unduly alarmist on manpower projections, and said that he was prepared to give guarantees on security of employment in his technical staff over the next ten years. He also maintained that the Post Office, together with Government and the manufacturing industry, was competent to deal with the complexities which lay ahead. "I remain unconvinced that a planning council, as proposed by Cripps and Godley, would contribute in any meaningful way to these decisions."

That may, or may not, be the case. But it is not merely the competence of the corporation, Government and industry which is the issue. It is that the Post Office will find itself involved in more and more areas from which it has previously been largely or wholly independent—broadcasting policy, employment policy, export policy. Can they all be contained within the competence of the Post Office?

MEN AND MATTERS

Faithful hold on to their money

James Callaghan has short-term anxieties enough about finance, with this week's onslaught upon the Budget at Westminster. In the medium-term, with a general election somewhere on the horizon, he must be pensively stroking his chin about the Labour Party's own finances. After seven months of fund-raising for the new party headquarters, planned for a site in the Watworth Road, £70,000 has been accumulated; estimated cost of the HQ is £1.6m. General secretary Ron Hayward has been explaining to foreign journalists in London that the party cannot send representatives to meetings of the Socialist International because of an austerity drive.

I was told yesterday from Transport House, where the party currently lives cheek by jowl with the Transport and

General Workers Union: "We seem to be permanently in the red." It is a sentiment with which Margaret Thatcher would doubtless agree. The party pays a peppercorn rent to the TGWU; so Callaghan must wonder whether, at the current level of donations, it will ever be possible to pay their wages when the new headquarters (due for completion in 1980) is occupied.

Of course, in extremes there is always the wealth of the big unions to call upon. The National Executive Council is now brooding upon a scheme whereby the unions would form a co-operative to build the headquarters, then let it out to the party. A cosy idea, but one that would make it painfully plain who pays the piper.

Songs and swords

In holding the latest OPEC conference in Taif, a summer resort 5,000 feet above Jeddah, Sheikh Yamani did his best to add a measure of light relief to all that serious talk about oil prices. My colleague Richard Johns reports that after a reasonably brisk dinner—including the mandatory sheep on a bed of rice for each table—delegates, security men and neo-Louis Quinze chairs to watch a folkloric pageant in Taif's new \$75m. Massarah Hotel. The show lasted four hours.

Oil Minister Yamani mounted the stage to say that the words of a song just rendered by Talal al Maddah, the Kingdom's indigenous favourite, had been written that morning by his counterpart from the United Arab Emirates, Dr. Manal al Otaiba. "He has dedicated it to an ex-unknown lover—who

he assures me has now gone back home." Otaiba replied defensively that the inspiration was purely "poetical and theatrical—to take my mind off oil dollar depreciation, SDRs and all that sort of thing."

The climax came as Yamani led ten of the 13 heads of delegations in a sword dance. Not on stage were Sid Ahmed Ghazli of Algeria and Tayeb Abdul-Karim of Iraq, who had left early, muttering that they and OPEC had work to do. Izzedin Mabrouk of Libya lasted the course, but in his impeccable white suit declined the invitation to dance.

Awaiting the thaw

When I was talking last week to Dr. Pyo-Wook Han, South Korea's ambassador in London, he said of the airliner that made a forced landing on a frozen Soviet lake: "We definitely want it back." He also insisted that the Russians had been most helpful about the whole affair, which began when the Korean Airlines polar flight strayed off course and was hit by shells from Soviet interceptors.

All the cargo has been removed and brought to Paris by Aeroflot. But the plane still stands on the ice of the frozen lake, 600 miles north of Moscow, and despite Dr. Han's optimism, I gather that it will stay there. As the ice melts, it will quietly sink into the mud, out of sight and out of mind.

When the pilot, Kim Chang-Kyu, landed with almost miraculous skill on the ice, the plane's undercarriage was damaged. To raise it and install a new one would require sophisticated gear. Then there would be the difficulty of getting the Boeing 707—which needs a long take-off—in to the air. The Soviet Union is likely

to have severe reservations about allowing the small army of western technicians needed to get the plane with many rocket installations. The best that is likely to be achieved is the salvaging of some electronic gear.

Lost at sea

"Some of our dummies are missing." That is the red-faced message from the RAF air/sea rescue base at Leuchars in Fife. Officers there will be delighted if any of their dummies, in full flying kit, are returned to them. Eight man-sized models were dumped in the North Sea on April 12, 80 miles off the Scottish coast, as part of a NATO search and rescue exercise named "Bright Bye." But an RAF spokesman has revealed that only a small—and unspecified—number of the dummies had actually been picked up by the helicopters and naval vessels engaged in the exercise.

He also admitted that one of the dummies had been found by a fishing boat and another had been washed ashore at St. Andrews Harbour. He appealed: "If any more turn up, we shall be delighted to have them back at Leuchars."

World beater ...

A new car called the Gemini now being sold Under Under, is described as having "a uniquely Australian blending of Japanese and German body styles." Visualise that. The Gemini is a product of General Motors Holden, but the hard-pressed Australian car companies as a whole look more and more towards Japanese ideas—and sometimes equity support—to help them sell cars.

Observer



The next time you go to the States on business take your wife and do it the cheaper way.

If you've always thought that crossing the Atlantic on the world's most luxurious ship, Queen Elizabeth 2, was a little extravagant, it's time to think again.

In fact, crossing on QE2 can actually work out cheaper than regular air fares.

The reason is a new special air/sea fare by Cunard and British Airways which allows you to sail out on QE2 and fly home all for £395. Or, if you prefer, you can fly out and sail home for the same low price.

Here is a comparison between these new fares and normal air fares to New York from London:

| | |
|---|----------------------|
| First Class QE2 Air/Sea fare round trip | £675-£775 |
| First Class Air round trip | £748 (Concorde £905) |
| Tourist Class QE2 Air/Sea fare round trip | £395-£440 |
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FINANCIAL TIMES SURVEY

Tuesday May 9 1978

FRIGG FIELD and ST. FERGUS GAS TERMINAL

Bringing the gas ashore was a question of putting our heads together

The Frigg Gas story is a unique example of international co-operation. In management. In communications. In human endeavour. In pioneering technology.

Together, Total Oil Marine and Elf Aquitaine brought Frigg Gas to St. Fergus.

Elf developed the off-shore installations. Five major platforms and a flare platform standing higher off the ocean floor than the height of the Post Office Tower.

Total handled the transportation. The pipeline and pipe-laying, an intermediate platform and the St. Fergus shore terminal.

The Frigg Gas field straddles the median line between Norway and the UK. It lies far to the north, in deep waters, hundreds of miles from the nearest land.

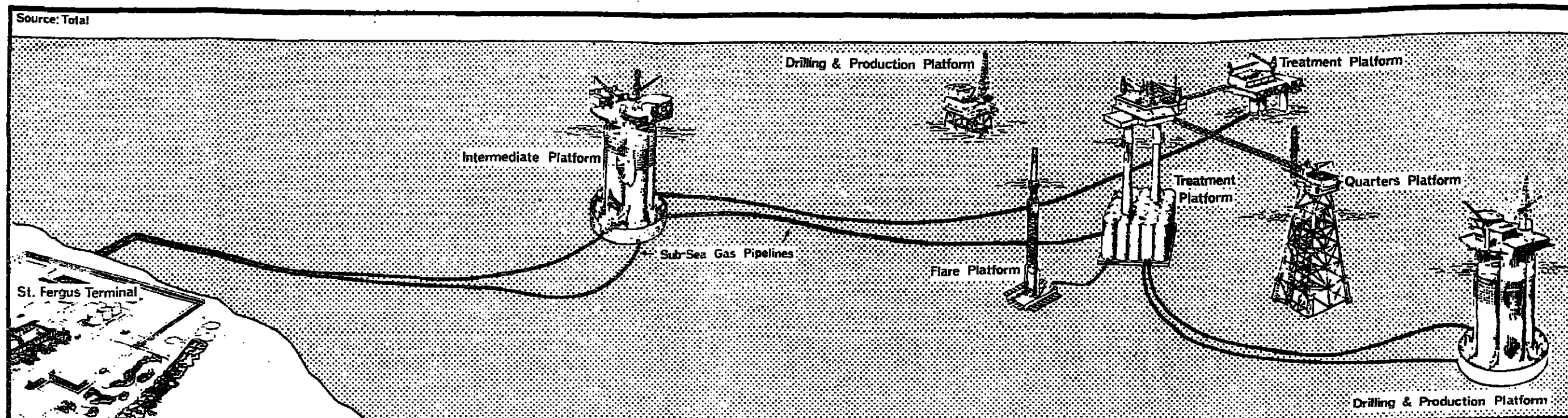
Jointly, Total and Elf tamed the wild North Sea, substantially increased the UK's energy resources and made a massive contribution to our balance of payments.

If you would like a brochure telling you about the Frigg story in detail, please write to the Public Relations Department of Elf Aquitaine or Total Oil Marine.



Elf Aquitaine
Knightsbridge House 197 Knightsbridge London SW7 1RZ
Total Oil Marine Ltd.
Berkeley Square House Berkeley Square London W1X 6LT

FRIGG FIELD AND ST. FERGUS GAS TERMINAL II



Two Royal inaugural presences, an investment running into several billions of pounds and a thoroughly international participation all bear witness to the significance of the North Sea Frigg Field and its associated terminal at St. Fergus in Scotland. This survey discusses its importance to Britain and Norway, the two countries principally involved, and the prospects.

A world-scale energy project

THE ROYAL inauguration of the Frigg Field and the St. Fergus Gas Terminal in Scotland—with Her Majesty the Queen and Norway's King Olav officiating at two separate ceremonies—sets the seal on one of Europe's most ambitious energy development projects, even by North Sea standards.

The costs involved provide some measure of the importance of the related developments. A Franco-Norwegian partnership of oil companies is investing some £2bn. in the exploitation of the field, which straddles the U.K.-Norwegian median line east of the Shetland Islands. That cost includes a complex of five main platforms installed on the field, a 360-kilometre dual pipeline system to the Scottish coast and a manifold compression platform which might well be used to boost the rate of supplies in future years.

British Gas Corporation, which has contracted to buy all of the Frigg gas under two 20-year supply contracts, has spent some £350m. on treatment facilities at St. Fergus and on new transmission and compression systems.

Viewed from an energy angle the Frigg Field will eventually raise Britain's fuel supplies by about 5 per cent. and save the balance of payments some £300m. a year by reducing the need for oil imports.

Frigg also marks the beginning of a new era for natural gas supplies in the U.K. As the latest Government "Brown Book" on offshore statistics reports, gas produced from the southern shallow-water fields of the North Sea last year amounted to some 34.3m. tonnes of oil equivalent which conservatively valued at present oil prices was worth about £2bn.

Now British Gas is looking towards the more northerly regions of the North Sea for

large new supplies of fuel. Frigg is the first of these fields to be commissioned, but within a couple of years gas will also start arriving from Shell/Esso's Brent Field. Brent, the largest field in the U.K. sector, not only contains substantial quantities of gas produced in association with crude oil, but also a "gas cap" in essence a gas field sitting on top of the oil reservoir.

As with the Frigg gas, supplies of natural gas from Brent will be carried by pipeline to the St. Fergus terminal near Peterhead. Here the gas will be regulated, treated and compressed to meet the requirements of the U.K. distribution system. As natural gas does not carry the normally accepted (legally required) gas smell, St. Fergus is one of the places where the distinguishing odour

Treated

is added.

The St. Fergus complex, which might well also handle supplies from any future gas gathering network that is built in the North Sea, has been constructed on a 500-acre site. Shared at present between British Gas and Total Oil Marine (the operator for the Frigg group's transportation and terminal projects) St. Fergus is one of the largest gas treatment plants in Europe. Yet the whole system can be run at any time by only a dozen or so operators. Even when maintenance, administration and service staff are included the total workforce does not come to much more than 160.

Some of the most sophisticated communications systems in the gas industry have been installed to speed the flow of information between the producers on the field, British Gas and its customers.

By the end of this year, St. Fergus should be able to handle up to 75m. cubic metres a day of Frigg gas, although the field is due to produce at an average level of 43m. cubic metres a day. This rate of production, which should be reached by the end of next year, is equal to about 30 per cent. of British Gas's current supplies. For the first time in several years British Gas salesmen have been engaged in a positive selling campaign to find new customers for the Frigg supplies.

The field itself is not only the biggest of its type in deep waters (estimated recoverable reserves are more than 7 trillion cubic feet or over 200,000m. cubic metres); it has also necessitated unique treaties and unitisation agreements between Government and commercial interests in Britain, Norway and France.

Studies carried out by independent petroleum consultants indicate that 60 per cent. of the reserves lie in the Norwegian block 25/1, where the licensees are: Elf Aquitaine Norge (41.42 per cent.); Norsk Hydro (32.78 per cent.); Total Marine (20.71 per cent.); and the State-owned Statoil corporation (5.09 per cent.).

Group

The Total-led group in the U.K. 10/1 concession which contains the remainder of the reserves are: Aquitaine Oil and Elf Oil Exploration and Production (Elf Aquitaine), with a two-thirds shareholding between them, and Total Oil Marine with 33.3 per cent. interest.

The partners point out that the combination of physical and political geography has dominated production plans for Frigg from the outset. With a mind to safety, Elf Aquitaine, in charge of offshore development, decided to separate drilling facilities from the treatment and accommodation units, a practice which is gaining favour in other North Sea fields. To drain the reservoir more effectively it was also decided that main production facilities should be sited in two places.

The result was one of the most ambitious development projects undertaken in the North Sea, certainly for a gas reservoir. At the peak of instal-

lation operations some 1,800 aged, somewhat spectacularly, were working simultaneously in 1974.

This steel structure, built by the J. Ray McDermott group, was being positioned in the case as floating hotels, three pipe-laying barges, a fleet of supply and standby vessels, several helicopters operating between the platforms and between the field and the shore, a mini-submarine and diving support boats.

Developments of this sort put into perspective the size of the offshore supplies market which has developed rapidly, both in Britain (and particularly Scotland) and in Norway. More than £2bn. is spent annually on offshore equipment and services in the U.K. sector of the North Sea alone. This figure represents about one-third of the total spent worldwide on offshore operations—a hint as to why the British presence at the Offshore Technology Conference and Exhibition in Houston at the moment ranks only second in strength to the Americans.

Frigg in fact provides a good shop window for the various types of fixed production installations available. The facilities comprise five major interconnecting platforms and a flare stack grouped on either side of the median line. (All the platforms were positioned with the aid of satellite navigation.) The main production facilities were built in several European countries.

The two treatment platforms are made of concrete because, according to Elf Aquitaine, they have additional safety advantages in the event of an explosion and are able to support a greater vertical weight of equipment than the more conventional steel structure.

The first of these platforms—TP1—was constructed by McAlpine-Sea Tank at Ardyne Point in Scotland; the second—TP2—was built by the Norwegian Condeep group at Andalsnes.

There is a third concrete unit in the field, a drilling platform (CDP1) built by Howard Doris and Norwegian Contractors in Andalsnes, Norway. This platform was not originally intended for drilling activities.

It was intended to sit half-way along the pipeline as a manifold compression unit. However, it was speedily converted to replace a steel platform dam-

aged, somewhat spectacularly, Elf Aquitaine's Northern Europe and Frigg operations.

The fact that the return is "acceptable"—stockbrokers' Wood, Mackenzie estimates—a DCF return of between 10 and 11 per cent.—is largely thanks to escalation clauses contained in the British Gas supply contracts. It is understood that the gas prices are partly linked to inflation and rising oil prices which means that the Frigg partners have some reason to be thankful for the four-fold rise in crude oil prices in 1973.

North Sea gas prices are kept a secret but it is thought that British Gas might be paying some 10p a therm for Frigg gas. The price is complicated because it pays a higher price for supplies from the Norwegian sector—gas which does not necessarily have to be sold in the U.K.—than it does for the captive supplies in the British sector. Even so, Frigg gas, taken as a whole is costing three to four times the amount being paid for gas from the southern sector of the North Sea.

While no one would deny that Frigg is making a vital contribution to Britain's energy supplies—and to British Gas Corporation's growth—it does present the gas undertaking with two particular problems.

First the Corporation has to assimilate the more expensive supplies without unduly loading its tariffs to domestic and commercial customers. Sir Denis Rooke, the British Gas chairman, has said that as most of the investment in the natural gas conversion project has been completed there should be no reason why gas prices should rise more rapidly than the general rate of inflation.

Secondly, British Gas recognises that it must control the pace at which it receives offshore supplies so that it is not forced into selling large quantities into the non-premium market. Consequently, as Frigg and Brent supplies build up so the output of the southern fields will be trimmed. It is hoped that in this way Britain will escape a bout of the other Dutch disease which results from using up gas resources too quickly and indiscriminately.

In the event, the start-up date slipped from the originally scheduled winter of 1977/78 to autumn last year. British Gas cautiously made its planning arrangements on the basis that it might not receive Frigg gas until January this year, although it did receive the first flow in September 1977.

This delay of some 15 months imposed an economic penalty of course. Costs rose from an initial estimate of £700m. to an eventual £2bn. The rate of return is still acceptable, although considerably poorer than the initial estimate, says M. Jean Curutchet, director of

Ray Dafter

Energy Correspondent

The "Two Miles a Day" Barge

On the 6th of June, 1976, the combination derrick-lay Barge ETPM 1601 laid 12,377 feet of 32" pipe (2.035 miles = 3.772 m.) in 24 hours, on the Frigg Pipeline, thus becoming the record holder for the longest distance of such pipe ever laid in a day, in the North Sea.

This was the peak production of an overall excellent laying season, and a fine technological achievement.

This was also the conclusion and reward of years of research and development, tight planning and heavy investment costs for ETPM, as well as the result of months of co-operation with TOTAL who placed their confidence in ETPM in order to have this major project carried out on schedule.



Work performed by ETPM-DLB 1601 on the Frigg Pipeline for TOTAL OIL MARINE

- 1975: Laying of 53,000 metres of 32" pipe between St. Fergus and Frigg Field at water depths 0 to 515 feet, including the shore approaches of Lines No. 1 and No. 2 with heavy coated pipes.
- 1976: Laying of 75,000 metres of 32" pipe between St. Fergus and Frigg Field.
- World record of 3,772 metres laid in 24 hours on 6th June.
 - Daily average laid on that section 2,495 metres.

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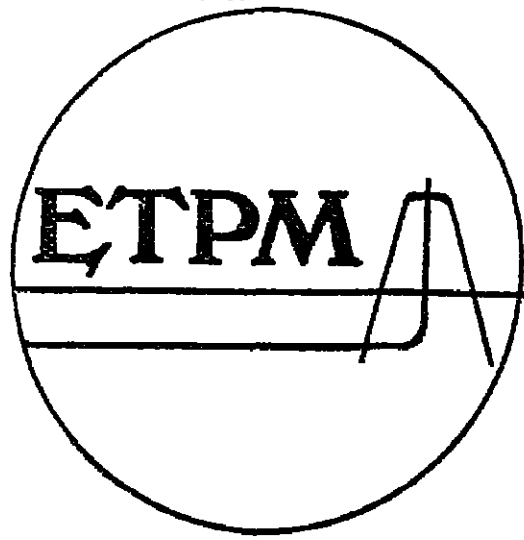
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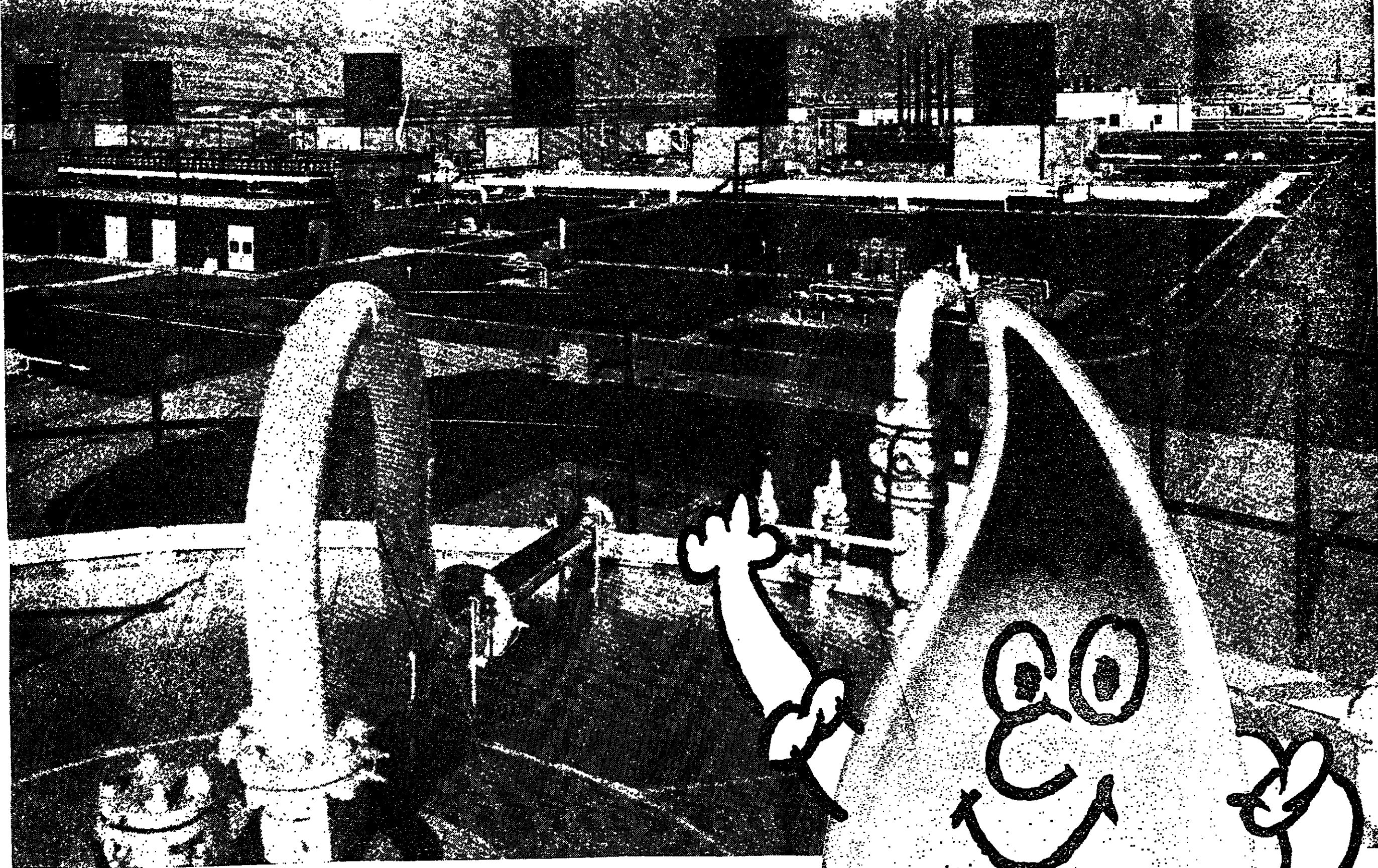
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Frigg Field is the biggest gas reservoir to be exploited in deep and hostile waters. Total Oil Marine's intermediate manifold platform, sited on the pipeline between the field and St. Fergus, withstands the pounding of the North Sea.

هكذا تمت الأجل

**"As you can see,
we're investing hundreds
of millions of pounds
in Britain's future."**



Today, Her Majesty the Queen accompanied by H.R.H. the Duke of Edinburgh, officially inaugurates the new British Gas terminal at St. Fergus, Scotland.

In this one project alone, we have invested almost £400 million to bring new supplies of natural gas from the vast Frigg Field, which straddles the median line between the British and Norwegian sectors in the northern North Sea, to our 14 million customers. As a result, even more natural gas will be available to heat our homes, cook our meals, and fuel our industries, now and for a very long time to come.

We at British Gas would like to thank all the companies who have contributed to the success of this huge, multi-national energy project, and particularly to express our gratitude to the local community and all those who live close to the route of the new pipelines and associated installations in Scotland and Northern England for their co-operation and patience during construction and commissioning.

May 9th 1978—a great day for British Gas, and a great day for Britain.

GAS GETS ON WITH IT

BRITISH GAS



FRIGG FIELD AND ST. FERGUS GAS TERMINAL IV

Energy policy

Secretary of State for Energy
Mr. Anthony Wedgwood Benn
discusses Britain's energy
prospects and options running
into the next century.

THE GOVERNMENT'S proposals for energy policy, as set out in the Green Paper published in February, are to continue to develop and maintain all four components of the present U.K. fuel economy—oil, gas, coal and nuclear power—together with energy conservation, in a way which will allow for adjustment and choice as uncertain prospects in the longer term become clearer.

At present we cannot tell exactly which mix of energy sources, including conservation, will prove most advantageous in the year 2000 and thereafter. We can see, however, in general terms the problems which are likely to arise. As we move into the next century the world's available oil will need to be increasingly reserved for essential uses, particularly in transport and the manufacture of petrochemicals. By that time our own supplies of oil will have started to decline. Coal may be able to fill some of the gap caused by the withdrawal of oil from crude heat production but coal itself may be needed increasingly as a raw material, like oil, for the manufacture of transport fuels and perhaps petrochemicals, and Substitute Natural Gas (SNG).

One possible scenario is based on nuclear power. Other possibilities include development of fusion power and renewable sources. These are often proposed as being more acceptable than nuclear fission power but their prospects are very uncertain. We do not know yet whether fusion power will ever prove practicable. The contribution from renewable sources, is likely still to be small by the end of the century, and cannot be relied upon to a tight timetable thereafter.

We need to keep the option of fast reactors open while at the same time continuing with the development of fusion power—the next stage of which will be the JET project located at Culham—and with putting increased resources into the development of renewable forms of energy, as the results of our

Russia and the Middle East cannot be ruled out.

Our policy on the use of gas is that it should be concentrated in premium markets such as domestic heating, industrial process and petrochemical uses. Premium demand is subject to seasonal fluctuation, however, particularly in the domestic sector, and the supply system has to be matched to peak winter demand. To assist in matching supply and demand and to provide the flexibility needed for safety, British Gas makes limited supplies of gas available to the non-premium market on an interruptible basis.

Disposal of substantial new quantities of associated gas could raise problems because such gas has to be produced at the same time as the oil. In some cases it may be technically possible to conserve the gas by re-injecting it, but in others it will have to be taken or flared. It is of course the Government's policy to minimise flaring. It was with this in mind that the joint public/private sector undertaking—Gas Gathering Pipeline—was set up to investigate the viability of gas gathering schemes in the Northern North Sea. I am now considering its final report.

Problem

But this problem of how to absorb an extra tranche of gas is purely short-term: as we see it our longer-term problem is a shortage, not a surplus of gas. On the other hand long-term damage to other fuels could be caused by a short-lived peak in gas supplies. It is normal for gas supply contracts to cater for market fluctuations by provisions under which some of the available supplies can be postponed for a few years. These provisions, together with our powers to defer production from new fields until it is needed, should enable unavoidable surges in the supply of associated gas to be contained. When the supplies of natural gas approach depletion they will have to be progressively replaced with SNG. It is difficult to forecast with any accuracy when and to what extent this replacement will be necessary, but the best estimate is that a significant proportion of our gas supplies will come from SNG by the early part of the next century.



Mr. Anthony Wedgwood Benn

SNG can be manufactured from oil or coal. The town gas of the sixties was made from oil, before the large-scale supplies of North Sea Gas became available. That, however, was in the days of cheap oil. For the future, the price of oil (which may well be double present levels in real terms by the end of the century) will make its use doubtful for base load SNG manufacture. It is to coal-based SNG that we shall probably look for future gas supplies.

Research into a range of advanced coal gasification techniques is undertaken by the British Gas Corporation. At its Westfield Development Centre in Fife work is being done on a commercial scale using an improved form of the Lurgi process including the more advanced technique of slagging gasification. The work is being partly financed by the U.S. Department of Energy on whose behalf British Gas is experimenting with SNG production from U.S. coals. In the short term British Gas expertise in SNG manufacture could be of great value to countries like the U.S. for which the need to move to large-scale coal-based SNG appears more pressing than for the U.K.

The Government's objective is to avoid too sharp a peak or too rapid a decline in our gas supplies so as to prolong the period in which premium markets, including petrochemicals, can be supplied without recourse to expensive alternatives. The best use of gas and our other energy supplies will have to be kept under review and continually developed during the coming decades.

*Energy Policy—A Consultative Document—Cmd 7701.
**Development of the oil and gas resources of the United Kingdom 1978—published by the Department of Energy.

Multiple role for the terminal

THE BRITISH Gas Terminal at St. Fergus, four miles north of Peterhead on the north-east coast of Scotland, could become one of the largest natural gas handling plants in Europe. Although initially designed to take gas from the Frigg Field through the 350-mile-long trunk pipeline, it has also been agreed that it will handle gas from Shell-Esso's Brent Field, 330 miles to the north-east. It could be receiving supplies in the near future from other fields as well.

The growth in importance of St. Fergus—before it is even officially commissioned—reflects the realisation that gas is an important source of fuel and feedstock, even when it is merely the by-product of crude oil. Illustrative of this is the Department of Energy's increasing reluctance to permit gas to be flared off at platforms. Operating companies are being forced to look for new ways of exploiting gas reserves rather than allowing them to be burnt in the atmosphere.

Occidental is one of the first groups to consider putting associated gas into St. Fergus by means of a spur line from its Piper Field to the main trunk pipeline; others may follow. Some rough and ready treatment of the gas at the platform may be necessary to make it compatible with that already being carried in the pipeline, but no great technical problems are raised and the potential benefits both to the country and to the company are considerable.

Parts

The St. Fergus terminal is in fact in two parts: the producer terminal, where Total Oil Marins as operators on the Frigg Field, will receive the gas and treat it to meet British Gas specifications; and the British Gas terminal.

When gas arrives in the Total terminal it has already been partially treated offshore, but the full process is sufficiently complex to have to be carried

pressure to the level of the national system.

Gas arriving at the terminal not only has to be pure: it has to meet other requirements such as calorific values, sulphur content and pressure. On the site is equipment to check all these specifications—as well as blending equipment to mix the slightly different gases from different fields—flow rate and pressure controls and odorising plants.

Odorant

Unlike the old coal gas, natural gas has no smell, which makes it potentially dangerous. Domestic users may be unable to tell if a tap has been left on or unable to detect leaks until too late. To overcome this an odorant is added which gives the gas a smell similar to that of the traditional manufactured kind.

The fact that St. Fergus also has to compress gas means that it has to have aftercoolers, which are not normally needed at landfill terminals. When gas is compressed, its temperature rises and, if not cooled to below 50 deg. C, would damage the wrapping around pipelines. Large fans are installed to do this job.

There are eight separate power units in the compressor station generating a total of 138,000 hp. They handle some 1.4bn. cubic feet of gas a day, but this figure could ultimately rise to 4bn. The units will be driven by industrial versions of the Maxl Avon and RB211 jet engines.

The end-product from the terminal is delivered to customers throughout Britain through a network of overland pipelines. It is essential that the supply of gas should be reliable and a number of special precautions have been built into the installation to ensure that this is the case.

The design of the British Gas terminal enables individual plants to be by-passed at any

stage so that should there be an emergency or a breakdown the supply does not have to be cut off. Should the pressure in the supply drop suddenly, a recycle valve automatically opens in the compressor station and the compressors reduce speed and can circulate the gas for an hour or more to avoid stopping the engines. The after-coolers come into operation to prevent overheating.

Two independent electricity supplies have been provided from the national grid, with a standby generator to operate the different sections of the plant in the event of a power cut.

To monitor the progress of gas through the plant there is a mass of electronic equipment connected to control centres in London, the Midlands and other regions of Britain by Post Office lines. As a back-up the microwave radio system that was previously in existence in the South and Midlands has been extended north to St. Fergus, with connecting UHF links to the new compressor stations on the pipeline.

The whole St. Fergus terminal can be run by a dozen or so operators—so advanced is its control and monitoring equipment. When all the staff needed to maintain a round-the-clock shift system, maintenance, administration and other services are counted up, the total workforce is only 180.

Total and the Gas Corporation have about 120 acres of the site each at present, but with an area of 500 acres available there is enough room for considerable future expansion. An attempt has been made to reduce the impact of the plant on the local landscape. An artificial lake on the south side of the complex needed for emergency water supplies has already been made a home for swans, herons and other wildlife.

Ray Perman

175 Pignone pipeline compressors for natural gas transportation in 12 different locations



65 in USSR



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12 in Argentina



10 in Austria



10 in UK



8 in West Germany



6 in North Sea



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3 in Hungary



1 in France



1 in Romania

Eight of these compressors boost the North Sea natural gas at the St. Fergus Terminal.

A series of three different compressor casings, for powers from 5000 to 65,000 hp, has been developed since 1962 by Nuovo Pignone. Three standard casings house impellers of 500-800-1000 mm diameters. Gas flows range from 36,000 to 2,400,000 SCMD.

A different number of impellers (1 to 4) may be mounted in the standard casings to meet the desired compression ratios. Revamping of the compressor to meet the changing pipeline characteristics can be carried out without involving the compressor casing and plant connections. Most of Pignone pipeline compressors are supplied complete with gas turbine drivers which the

company manufactures under a "Manufacturing Agreement" with General Electric. Nuovo Pignone capabilities for natural gas compression go well beyond the manufacture of the turbocompressor sets—the Company has been awarded contracts for the supply of complete compression stations as "turn key" plants.

NuovoPignone
En Group

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Marketing strategy for the gas

THE BRITISH Gas Corporation is already winning the lion's share of the growth in the U.K. fuel market. But it faces a major marketing effort over the next few years if it is to find the extra customers to take the rapid build-up of new supplies now being coming available from the Frigg Field.

The increasing production from Frigg, the largest gas field yet developed in such hostile waters as the northern North Sea, will boost Britain's gas supplies by more than a third and will meet over 5 per cent. of primary energy requirements. The field represents a new source of supply at a time when production from some of the southern fields is passing its peak.

It was the discoveries in the southern part of the U.K. sector of the North Sea from 1965-1968 which first transformed the British gas industry and provided the opportunity for it to embark on a complete change-over to natural gas from the relatively high-cost town gas manufactured from coal or oil. Supplies from northern fields such as Frigg, and later Brent, will help ensure gas deliveries to the premium markets to the end of the century and beyond. They have also enabled the gas transmission network to be extended to the north of Scotland and have greatly increased the flexibility and security of distribution.

The emergence of British Gas as a major force in the U.K. energy market has not been without controversy. The rift between the various State energy industries over the relative price of fuels has recently come into the open, with the gas industry facing a concerted assault from the coal and electricity supply industries which see their market shares shrinking at a time when they can do little to halt their increasing lack of competitiveness on prices. According to Sir Francis Tombs, chairman of the Electricity Council, gas should be priced at a level which takes into account the cost of its future replacement by other fuels. Otherwise it will damage the long-term markets for coal and electricity.

"If gas is to dominate the energy market," says Sir Francis, "then its competitors and potential substitutes, electricity and coal, will have limited markets and will not be able to afford the investment necessary on a very long time scale in

order to provide the capacity to replace the gas when reserves are depleted." Manufacturers of main plant and domestic equipment in the electricity industry were forced to cut investment, since only limited investment was taking place in the coal and electricity industries. British Gas's present pricing policy, according to Sir Francis, is creating "a precipice problem of substitution for depleted reserves of gas at the end of the century."

Price

The electricity industry has maintained that the cost of producing gas is about 1.9p per therm while the cost of producing electricity is nearer 8p per therm. But the Gas Corporation takes issue with these figures. It claims that the average price of gas delivered to its terminals, which includes transmission costs, is higher, and it says the price is rising. It is possible that the average price will be nearer 6p a therm in three years' time, it says, as supplies from Frigg build up.

The £2bn. exploration and development costs of this field have dictated a comparatively high price by past North Sea standards. It is thought that British Gas might be paying some 10p a therm for Frigg gas, although the exact price is a commercial secret, complicated

by the fact that the corporation is paying more for its supplies from the Norwegian side of the field than for those from the smaller U.K. portion, which represents about 40 per cent. of the total.

British Gas is anxious to avoid any sudden increases in tariffs, and it plans that future rises should be gradual in line with the general rate of inflation. Despite the much higher costs of operation in the inhospitable northern waters of the North Sea, some British Gas costs are now lower—particularly interest charges, as it has repaid the loans that were necessary to cover the cost of the natural gas conversion programme and has written off the obsolete gas manufacturing plant.

But however the dispute over pricing is resolved, British Gas is still left with the task of increasing its present total of 14m. customers in order to find a market for the rapidly mounting supplies of extra gas it has contracted to take from the northern fields. Sales of gas have already risen steeply from the total of 3.5bn. therms a year when the first North Sea discoveries were made in the mid-1960s. When Frigg supplies began last September sales had climbed to a level of 1.4bn. therms a year.

Sales in the domestic market

have more than doubled from 2.6bn. therms in 1967 to 5.3bn. therms in 1977. Deliveries in the field than for those from the smaller U.K. portion, which represents about 40 per cent. of the total.

About 30 per cent. of the total heat supplied in Britain comes from gas and it meets around 18 per cent. of the U.K.'s primary energy needs. It is now taking more than 40 per cent. of the domestic market for energy, around a quarter of the industrial market and it is obtaining a dominant share of all new system installed in both homes and commercial buildings.

The gas from Frigg alone will add more than 30 per cent. to the industry's supplies by the end of the decade, and the Gas Corporation is putting the greatest stress on concentrating the new growth in the premium markets such as domestic and commercial heating and high-grade industrial processes, where the special values of gas as a clean and flexible fuel with high heat efficiency can be most effectively applied.

British Gas says that about half of the expansion in sales based on Frigg should come

CONTINUED ON PAGE VII

When you're 100 miles from the nearest land sound waves become pretty important. Good shore communications are imperative. Not just for safety, but for planning, data handling and control.

In the Frigg Oil Field, Burmah Telecommunications Division designed and installed one of the most complex communications systems in the world, for Total Oil.

Utilising tropospheric scatter, microwave, SOLAS, sea-air links, telemetry and emergency standby systems, this vast project is just one of a wide range of industrial and commercial communications systems now working efficiently thanks to Burmah know-how.

If you'd like to know more about us, contact Burmah Telecommunications, now.

Burmah ENGINEERING

Telecommunications Projects Division.

Burmah House, Sharston Road, Manchester M22 4TD, England. Telephone: 061-998 7021. Telex: 668782.

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FRIGG FIELD AND ST. FERGUS GAS TERMINAL V

Prospects for reserves

MOTHER NATURE has no regard for diplomatic niceties. Extensive exploration drilling in the North Sea has shown that a number of the best prospects lie directly beneath the U.K./Norwegian median line—Storfjord, the biggest oilfield so far discovered in Western Europe, and Murchison are two cases in point. When companies begin to explore seriously in the Western Approaches they are likely to find reservoirs straddling the U.K./French median line, the route of which has only just been fixed after years of wrangling.

Frigg is in a similar position; an estimated 60 per cent. of the reserves lie in the Norwegian block 25/1 with the remainder in the U.K. block 10/1. Named after the wife of Odin, god of Norse mythology, the field was discovered on the Norwegian side in June 1971 by Elf Aquitaine, acting as operator for the Franco-Norwegian Petronord group.

Contrary to popular belief, exploration wells are not drilled merely in blind faith. A good deal of geological study, assisted by seismic tests, is conducted before an oil group commits itself to a "wildcat" well costing possibly several millions of pounds.

Spotted

Geologists employed by the French companies had spotted what appeared to be a promising oil or gas structure on early seismic maps well before the allocation of block 25/1 in 1968. Total and its partners drilled an appraisal well in the adjoining block 10/1 in U.K. waters, a block acquired by the French group, Total/Elf/Aquitaine in the third round of licences in 1970.

The French companies were among the first in the North Sea to use successfully a sophisticated seismic method—called the "bright spot" technique—which under certain conditions can detect the presence of hydrocarbons from changes in the density of rocks.

Using this additional information Elf Aquitaine planned its first well on block 25/1.

The structure seen on the early seismic maps and dubbed the Chinese Butterfly by geologists was immediately proved to contain a significant gas field. That first well, completed on July 22, 1971, tested a flow of gas at a rate of 700,000 cubic metres a day. The well was drilled to a total depth of about 15,000 feet, locating a thin oil layer below the main gas reservoir.

While Frigg is now accepted as a gas field, the structure does contain a large amount of crude oil by North Sea standards. The Riggs National Bank of Washington, in its latest status report on North Sea development drilling, estimates that between 750m. and 1.2bn. barrels of oil have been discovered below the gas sands.

For the time being these oil reserves have been discounted as an uneconomic proposition for three main reasons: 1—technical problems with producing a heavy type of crude (23 degrees API) in such remote and hostile waters; 2—the broad distribution of the reserves; and 3—the relatively thin layer of the oil column, some 30 to 35 feet thick according to Riggs.

The second well on block 25/1 followed immediately after the first and again proved the existence of a gas formation within an underlying thin layer of oil. The Frigg partners now embarked on a dual drilling programme through the winter of 1971-72 and this showed that the field did straddle the median line as seismic tests had indicated; both the third well on 25/1 and the first one on block 10/1 in the U.K. sector were reported to be successful.

All told eight exploration and appraisal wells were sunk on the main Frigg structure; four on the Norwegian side and four—including one dry one—in U.K. waters.

What they have shown is that Frigg is one of the largest offshore gas fields yet discovered in the North Sea, with estimated recoverable reserves of more than 200bn. cubic metres or 7 trillion cubic feet of natural gas. What is more, Frigg contains

good quality gas. It is low in sulphur and largely free of heavy or wet gases. Its composition is 95 per cent. methane—the natural gas used by domestic, commercial and industrial users for heating purposes—4 per cent. ethane (a fuel or chemical feedstock) and small traces of heavier liquids. The thickness of the gas-bearing sands is also good, some 140 metres from its top to the underlying oil layer. Finally the natural pressures of the reservoir are good, as tests on the first well showed.

Committed

All the reserves have been committed to the British Gas Corporation under two separate supply contracts of over 20 years, signed between the U.K. and Norwegian partners in 1973. Following an appraisal of the recoverable reserves by independent consultants De August, 1973, in block 25/2, Golyer and MacNaughton the field has been developed as a unit under a unitisation agreement ratified by a unique treaty

between the U.K. and Norway. Now partners in Frigg are beginning to look at the possibility of developing the satellite gas fields in the area. M. Jean Curutchet, director of Elf Aquitaine's Northern Europe and Frigg operations, has pointed out that the partners had reserve processing capacity to handle new supplies. While the partners were committed to a peak capacity of between 55m. and 60m. cubic metres a day they could, in fact, handle a total of 90m. cubic metres a day without additional investment on the processing side.

The problem, he said, arose from drilling and production from the relatively small reservoirs that lie in the Frigg vicinity. There are three named daughters of Frigg: East Frigg, Northeast Frigg and Southeast Frigg. The first two of these have a much better chance of development.

East Frigg was discovered in August, 1973, in block 25/2, some 18 miles from the centre of the Frigg Field. Reservoir properties are said to be comparable to Frigg and again the

gas is underlain by oil. Indeed, it is thought that there may be a gas connection between Frigg and East Frigg. According to Riggs Bank the pressure communication between the two could eventually result in either gas migration from East Frigg to Frigg or reduced recovery potential at East Frigg unless it is developed reasonably quickly.

Gas reserves in place in East Frigg are estimated to be about 8.5bn. cubic metres of which some 6bn. cubic metres are thought to be recoverable. Sub-sea well systems and pipelines to Frigg may be used for the development although the Frigg partners might want to see some reasonable cash flow from its current heavy investment before embarking on more spending. On the other hand, they cannot wait too long. M. Curutchet recognises that the Norwegian Government is concerned about the way the exploitation of Frigg might affect East Frigg. He thought that the risk to East Frigg was "very small" although, quoted in the latest Offshore Services magazine, he confirmed that

there was a dialogue continuing between the partners and the Norwegian Petroleum Directorate.

The field known as North East Frigg is a much bigger reservoir, perhaps containing 14bn. cubic metres of recoverable gas. Lying in block 25/1 and Esso's 30/10 concession (both in the Norwegian sector), the field shows similar characteristics to Frigg, some 10 miles away. But here too there are doubts whether the reserves could justify the development of a fixed production platform. The exploitation of North East Frigg, discovered in the spring of 1974, might have to await the development of the much nearer Odin Field.

Doubtful

The South East Frigg reservoir is a much more doubtful prospect at this stage. Discovered in 1974 in block 25/2 it has just 1.05bn. cubic metres of recoverable reserves according to estimates of the Norwegian Petroleum Directorate last summer. On this basis commercial development is very uncertain unless more gas can be found and confirmed. This looks like a prospect to be pigeon-holed, for the Frigg partners have plenty to busy themselves in the next few years.

R.D.

the Frigg formation, then the latter will have a closed pressure system. This could cause drainage from the satellites towards the main field, in order to get them into production during the life of the Frigg transportation system.

What are the commercial prospects of the satellites? The oil companies involved (Esso, for Odin and N. E. Frigg; the S. E. Frigg and Heimdal tend to be non-committal. A spokesman for Norsk Hydro pointed out that these are relatively small fields—seen in relation to the level North Sea costs have now reached. An Esso executive said his company was studying Odin and N. E. Frigg and "hoped to come up with viable plans" for them.

Determine

Some pre-design work had been done to determine likely development costs. The problem was to find developments which were economically feasible, while still taking account of environmental, safety and resource considerations. In addition Esso had been in touch with both the Oil Directorate and the Frigg partners (since gas from Esso's satellites would have to go through the Frigg transportation system). The company was keen to reach a conclusion as soon as possible, but "there are other parties involved."

One of the other parties of course is the British Gas Corporation—the natural customer for Frigg satellite gas now that the scheme for a small diameter pipeline to Norway has more or less been shelved on economic grounds. Will the Corporation be prepared to offer enough for the gas to make production worthwhile?

The Norwegian Government may be willing to make concessions that could influence oil company calculations. Deputy Oil and Energy Minister Trygve Tambsrud said recently that his Ministry was considering "special arrangements" that it hoped would induce companies to develop six marginal fields in Norway's sector, among them the Frigg satellites, E. Frigg, N. E. Frigg, Odin and Heimdal. The special arrangements would probably vary from field to field, he said, and could range from partial tax exemptions to dispensation from normal regulations concerning depletion rates. He said talks about this had already started between the oil companies and the Oil Directorate.

It is not yet certain which of these scenarios is the more likely. An observation well is being drilled this year from the drilling and production platform DP-2. This well will pass through the Frigg formation, the tuff zone and the Heimdal formation. It will allow observation of fluid movements and pressure variations which could over a period of time reveal whether (and how strongly) water is flowing into the Frigg formation during production. It is anticipated, however, that observations will have to be made over a period of one to two years, from the time full production starts, before a fairly certain reply can be given.

The Oil Directorate annual report says that early development of the satellites is desirable, even if there should prove to be no danger of drainage towards the main field, in order to get them into production during the life of the Frigg transportation system.

Fay Gjester
Oslo Correspondent

The satellite fields

THOUGH THE main Frigg interesting.

There is, however, a case for arguing that if the Frigg satellites are to be developed at all, they should be developed as soon as possible. Because of the reservoir structure the Norwegian Oil Directorate believes there is a possibility that gas from the satellites may drain towards Frigg itself, now that the field is in production. The longer production of the satellites is delayed, the less they may be able to produce.

The rapid rise in North Sea costs is making development of marginal fields in general less attractive than ever to oil companies. This applies particularly perhaps to companies already involved in development of relatively profitable finds. It is tempting for oilmen to postpone taking the plunge on marginals, in the hope that technological advances or rising petroleum prices could in time change the economics of these fields and (East Frigg, South-east Frigg, and North-east Frigg and Odin) are

local structures on a continuous stratum of Eocene sandstone, the Frigg formation, with limited lateral extension.

The sand in the Frigg formation is partially consolidated and has an average porosity of about 25 per cent. Permeability is relatively good. The gas collected in the structures consists of about 95 per cent. methane and has a relatively low condensate content. Between the gas-bearing zone and the water-bearing zone that underlies it is a thin non-commercial oil layer.

Beneath the Frigg formation lies an older sand deposit, the Heimdal formation (previously called the Cod formation). This is believed to have been deposited continuously over a very wide area, compared with the extension of the Frigg for-

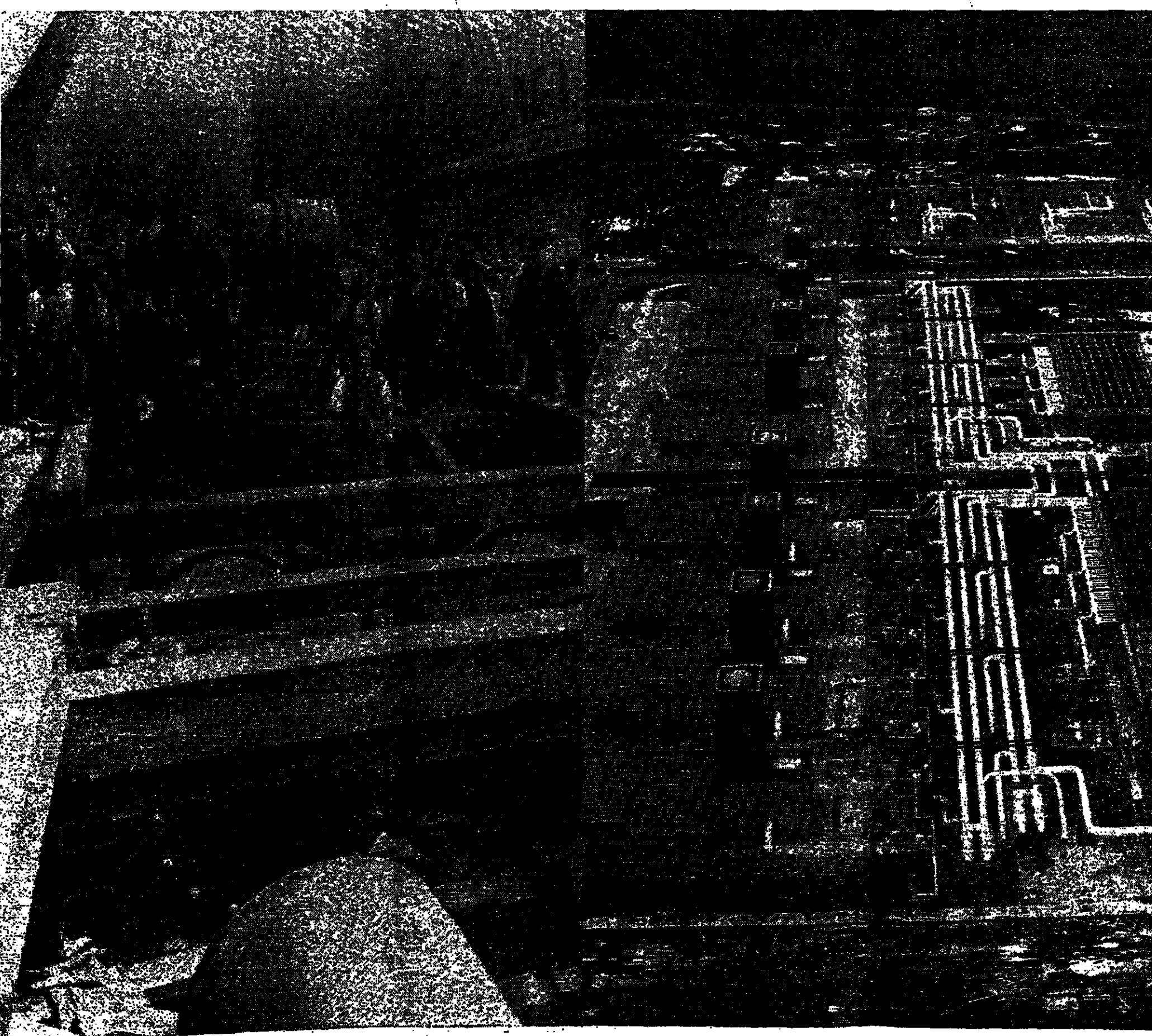
mation. The Heimdal gas field, which (for development purposes) can also be regarded as a satellite of Frigg, lies about 40 km. south of it and is a condensate-bearing structure in this formation.

Separated

The Frigg and Heimdal formations are separated by a zone consisting of sandstone and slate. This zone also contains some volcanic ash (tuff) and is therefore generally called the tuff zone.

The structure and extent of the tuff zone—not yet fully known—will affect both the recovery factor of Frigg and the effect its production will have on the satellites. If the zone is impermeable, and moreover continuous under the whole of

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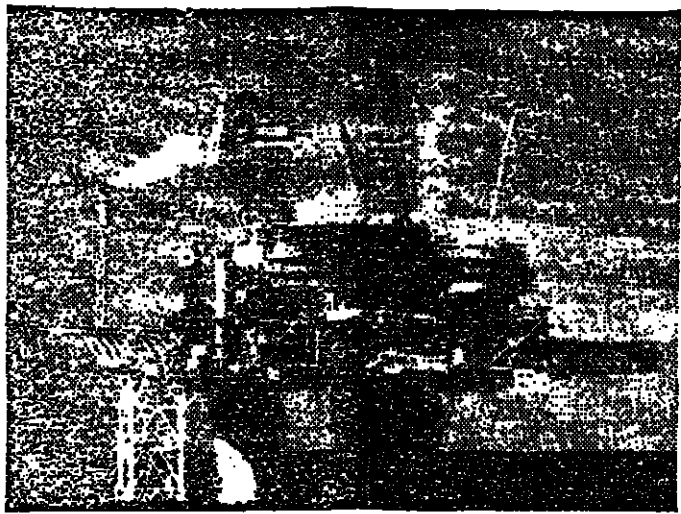
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FRIGG FIELD AND ST. FERGUS GAS TERMINAL VI

Gas collection systems

THE LATEST studies into possible gas collection systems in the North Sea have clearly shown that whatever option is adopted the twin pipelines from the Frigg Field to St. Fergus will play an important part.

The bulky report from the Gas Gathering Pipelines study company, presented to Government within the past month, has still to be published. It will have to have the wealth of confidential commercial information extracted first. But it seems that GGP has concluded that there is insufficient gas in reservoirs so far identified but not yet exploited to justify the construction of a new major trunkline system.

This will be a blow to pipeline builders — particularly British Steel Corporation — and those who would have been associated with the laying of such a line and the fabrication of allied equipment. For some time there has been talk in the industry of the need for a new 800-mile pipeline network which, with associated facilities, might have cost as much as £5bn.

Such an ambitious system may be built one day, assuming more gas is found in the North Sea — and there is a distinct possibility that another major gas field will be discovered. In the meantime, the Government is likely to sanction a first-stage mini-collection system, costing perhaps £250m. to £500m. Such a system would link a number of fields with the Frigg and Brent gas lines. Reservoirs in remote locations, perhaps with too little gas to justify a pipeline link, might well be exploited in another way. Novel systems now being considered by both industry and Government experts include the off-shore conversion of gas into electricity for transmission to shore through cables. New techniques are now making this option much more attractive. Alternatively the gas could be liquefied offshore for shipment in LNG carriers or even converted into methanol or ammonia.

Similar steps have also been taken with at least two fields close to the Frigg pipelines. Occidental is to send small quantities of associated gas ashore from its Piper Field via a link with the U.K. Frigg line while Texaco is to adopt a similar system for gas in its Tartan Field.

The Piper gas gathering system is being implemented as a Government-imposed condition for increased oil output from the field. In essence the Department of Energy told the Occidental consortium that it could raise the peak oil production from Piper by up to one-third providing an acceptable gas recovery facility was built.

Occidental's proposals, costing over £85m., include using some of Piper's 90bn. cubic feet of gas reserves on the nearby Claymore Field — for power generation and reservoir activation — with the remainder being sent ashore via the Frigg Energy Secretary, commented a system. The 35-mile-long Piper-Frigg pipeline is expected to be built later this year.

The capacity of this spur line will be about 90m. cubic feet a day. As the peak production of Piper gas through the line is expected to be about 21m. cfd — reached next year — there will be plenty of spare capacity for gas from other reservoirs. This permission to build a gas pipeline link between their Cormorant and Brent oil fields, they want to transport the Cormorant associated gas to St. Fergus via the Brent system's "FLACS" pipeline now under construction. Furthermore, it

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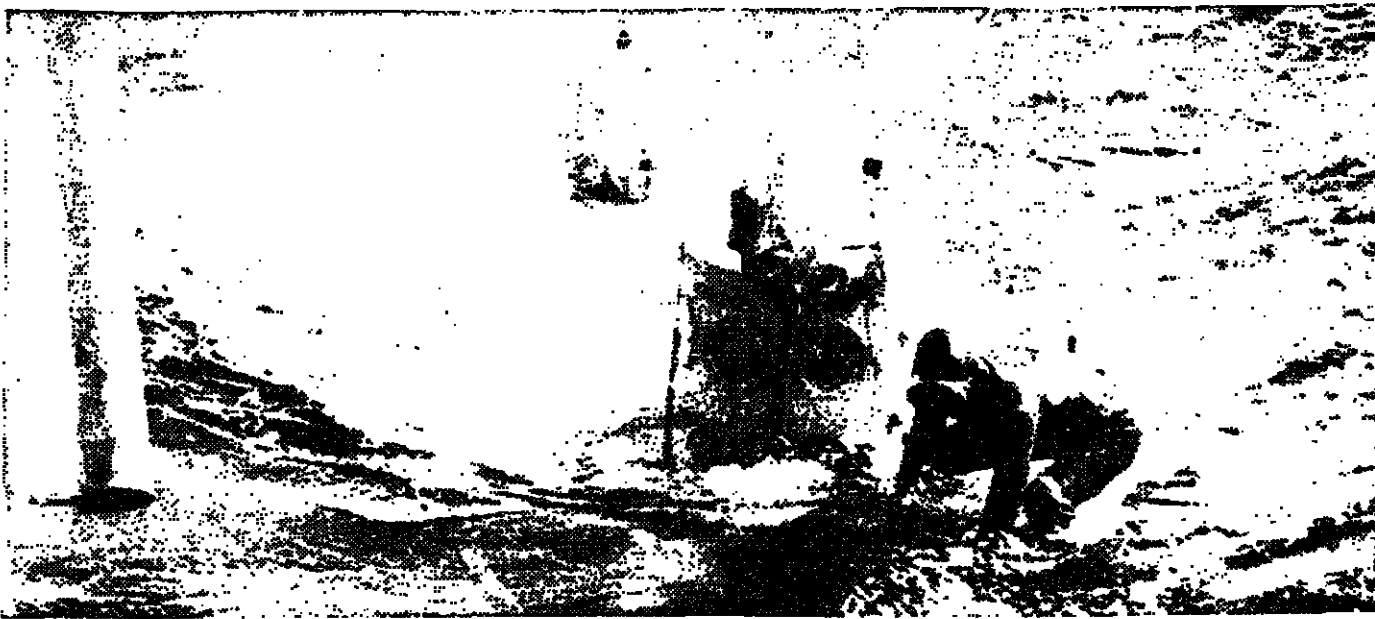
Work continued over three laying seasons from 1974 to 1976 and, at the peak of activity, included the employment of three pipelaying barges, two pipe-burying barges, two pocket submarines with a support vessel and a total fleet of around 60 service ships to ferry pipe lengths to the barges, to handle the anchors and to provide equipment and provisions.

By the time that the finishing touches were finally placed in 1977, the whole transportation system, including the two lines and intermediate platform halfway along, had cost some \$1.2bn. (excluding interest charges) around 30 per cent. of the overall cost of the entire Frigg development.

These are, of course, simply statistics, much beloved by the industry and of rather less meaning to those outside. Frigg, after all, is one stage — albeit a major one — in the development of offshore pipe construction which started a decade before in the southern sector of the North Sea and is already moving on to much greater distances and much deeper waters.

But for the companies involved it has been one of the most ambitious North Sea projects so far while even for Total it will probably prove the largest and most costly exercise of this decade.

It is not simply the distances involved or the depths of water (up to 800 feet). It is also the immense logistical effort of determining a route and organising the equipment and contractors to complete the task in as small a space of time as possible. All the more so as pipe-laying is the most painstaking and the most sensitive to weather of all offshore operations. The precast pipe in ETPM 1801, could get no nearer



One of the mini-subs used in the Frigg-St. Fergus pipeline operation returning to her mother ship after completing a survey dive on the pipe.

seems that other fields to the west of Brent might also be linked to the Brent pipeline. Apart from Cormorant, the fields that could be tapped are Chevron's Ninian Field, and Unocal's Heather Field, both due on stream later this year, as well as Amoco's North West Hutton Field which has yet to be developed. It is estimated that the cost of pipelines for this network alone could exceed £70m., although compression facilities would raise the price considerably.

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Stockbrokers Wood, MacKenzie reported recently that the Frigg partners might charge 60 cents per million cubic feet to carry Piper gas through its trunkline. On this basis, says Wood, MacKenzie, Piper partners would pay the Frigg group \$4.5m. next year.

There is a possibility that other U.K. discoveries could be linked to the Frigg trunkline, particularly now that the chances of a major new pipeline system seems to be receding. In its 1976 report on gas gathering systems, consulting engineers Williams-Merz drew up one option which would connect the Beryl Field, the Bruce Field and Total's discovery on block 3/25 with the Frigg line.

Williams-Merz estimated that a new gathering network for the whole of the U.K. sector could carry between 1bn. and 1.5bn. cubic feet a day over a 12-year period. This would be in addition to the 6m. to 9m. tons a year of heavier gases — ethane, propane and butane — which might be used as the basis for a major expansion of the

chemical industry. Apparently GGP has taken a more cautious view of both the proven and probable gas reserves and the possible rate of production. On this assumption GGP must also be at odds with consultants Buchanan and Clacher which, in a £3,000 report on collection systems estimated that by 1985 production from the North Sea could reach over 5m. barrels of oil a day, 13bn. cubic feet a day of natural gas, and up to 30m. tons a year of gas liquids.

Buchanan and Clacher were included in the Norwegian sector in its reckoning, however. This is right, for it now seems increasingly likely that at least some of the currently unexploited Norwegian gas reserves will be transported to the U.K., again quite probably through one of the Frigg gas lines.

The most obvious reservoirs to be tapped in this way lie in quadrants 25 and 30 of the Norwegian sector, conveniently close to the Frigg Field complex. According to recent Norwegian reports four of these known fields could contain some 85bn. cubic metres of recoverable gas reserves: Odin (30bn.), North East Frigg (14bn.), East Frigg (6bn.) and Heimdal (35bn.). This is quite apart from the estimated 68bn. cubic metres of gas in the big U.K./Norwegian Stafford Field further to the north.

If some or all of this new gas was to be fed into the Frigg system throughput capacity, particularly on the Norwegian line, would probably have to be upgraded by means of compression facilities on the intermediate platform. As the dual pipelines are not utilised the new Norwegian gas would almost certainly be carried through the Norwegian line which is destined to be fairly full with Frigg gas anyway.

The Frigg Field is due to produce at a level of 43m. cubic metres a day by the end of 1979 — equivalent of about 30 per cent. of British Gas Corporation's current supplies. In view

of the utilisation agreement for the field, some 60 per cent. of the flow will be through the Norwegian portion of the pipeline system. The free flowing capacity of each pipeline is about 30m. cubic metres a day which indicates how little spare capacity there will be in the Norwegian line without increasing the pressure limits.

Upgrading the line with compression facilities is well within the bounds of modern technology — indeed, tentative provision for this has already been made by the Frigg partners. A much thornier problem will arise with the disposal of the gas.

Norwegian producers will want to sell their gas at the most favourable price. In current circumstances that price is related more to the Continental market than to tariffs in the U.K. Furthermore, it is questionable whether, in the interests of conservation, British Gas will want to buy large quantities of additional gas in the next few years in view of the supplies from Frigg, Brent and the southern gas fields.

The answer to this problem — and it is a possibility being considered — is that new Norwegian gas should be carried through British Gas Corporation's distribution system (for a fee) to a new pipeline which would be built across the English Channel.

Up to now British Gas has been against the construction of such a pipeline. It has argued that it would be too easy for gas-thirsty Continental users to suck precious supplies from the U.K. However, there is another side of the argument. The Continent is also developing a distribution system to handle gas supplies from places like Russia and North Africa. Maybe one day British Gas will be pleased to be connected to this wider system when supplies from Frigg, Brent and other fields become exhausted.

R.D.

Reckoning

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Up to now British Gas has been against the construction of such a pipeline. It has argued that it would be too easy for gas-thirsty Continental users to suck precious supplies from the U.K. However, there is another side of the argument. The Continent is also developing a distribution system to handle gas supplies from places like Russia and North Africa. Maybe one day British Gas will be pleased to be connected to this wider system when supplies from Frigg, Brent and other fields become exhausted.

R.D.

Reckoning

Buchanan and Clacher were included in the Norwegian sector in its reckoning, however. This is right, for it now seems increasingly likely that at least some of the currently unexploited Norwegian gas reserves will be transported to the U.K., again quite probably through one of the Frigg gas lines.

The most obvious reservoirs to be tapped in this way lie in quadrants 25 and 30 of the Norwegian sector, conveniently close to the Frigg Field complex. According to recent Norwegian reports four of these known fields could contain some 85bn. cubic metres of recoverable gas reserves: Odin (30bn.), North East Frigg (14bn.), East Frigg (6bn.) and Heimdal (35bn.). This is quite apart from the estimated 68bn. cubic metres of gas in the big U.K./Norwegian Stafford Field further to the north.

If some or all of this new gas was to be fed into the Frigg system throughput capacity, particularly on the Norwegian line, would probably have to be upgraded by means of compression facilities on the intermediate platform. As the dual pipelines are not utilised the new Norwegian gas would almost certainly be carried through the Norwegian line which is destined to be fairly full with Frigg gas anyway.

The Frigg Field is due to produce at a level of 43m. cubic metres a day by the end of 1979 — equivalent of about 30 per cent. of British Gas Corporation's current supplies. In view

of the utilisation agreement for the field, some 60 per cent. of the flow will be through the Norwegian portion of the pipeline system. The free flowing capacity of each pipeline is about 30m. cubic metres a day which indicates how little spare capacity there will be in the Norwegian line without increasing the pressure limits.

Upgrading the line with compression facilities is well within the bounds of modern technology — indeed, tentative provision for this has already been made by the Frigg partners. A much thornier problem will arise with the disposal of the gas.

Norwegian producers will want to sell their gas at the most favourable price. In current circumstances that price is related more to the Continental market than to tariffs in the U.K. Furthermore, it is questionable whether, in the interests of conservation, British Gas will want to buy large quantities of additional gas in the next few years in view of the supplies from Frigg, Brent and the southern gas fields.

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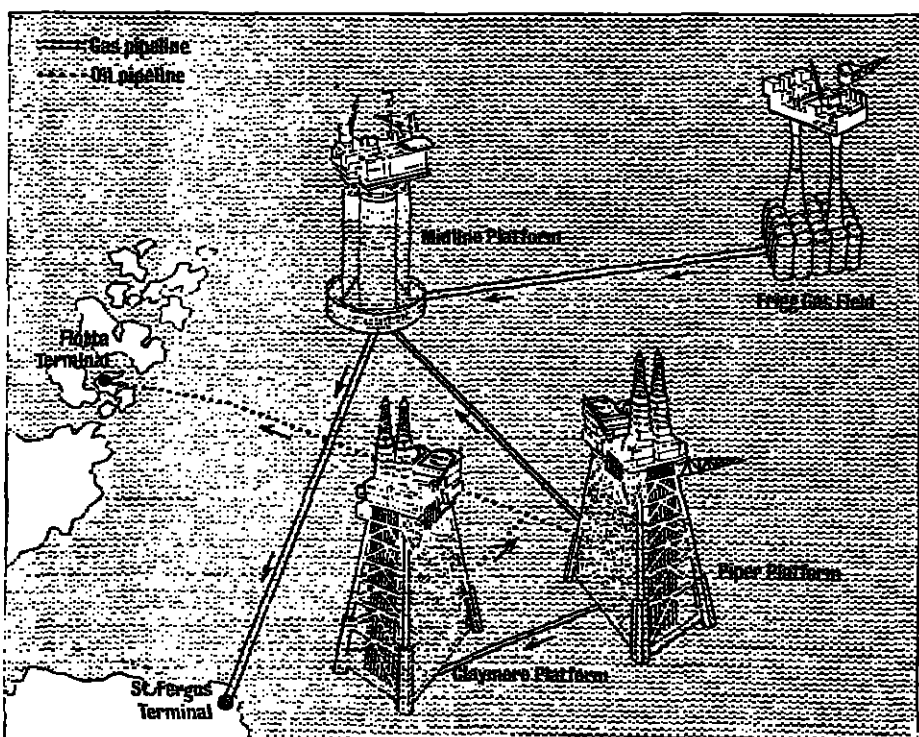
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R.D.

Further success is in the pipeline.



Congratulations to Total and Elf Aquitaine on their outstanding achievements in developing and commissioning the Frigg project under some of the most difficult conditions yet encountered in the North Sea.

The Frigg U.K. Group is also helping us to establish the first U.K. Associated Gas Gathering System, which will be jointly owned by the Occidental Consortium and Texaco. 15-inch pipelines will be laid

this summer from the Frigg line to Piper and thence to Tartan, linking these oil fields to the Frigg U.K. gas pipeline system.

The link will carry up to 90 million cubic feet of gas per day for eventual delivery to British Gas. Conservation of Piper's gas is scheduled to commence later this year and Tartan's gas in about two years' time.

All this is being made possible by creative co-operation between Total Oil Marine Limited, its

partners, Texaco, British Gas and the Consortium. It works for us and it works for Britain.



The Occidental Consortium
Occidental Petroleum Corp. Operator
Elf Aquitaine
British Gas
Texaco
Total Oil Marine Limited
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فكرنا من الأول

FRIGG FIELD AND ST. FERGUS GAS TERMINAL VII

Under several flags

THE BRIDGE connecting two of the platforms in the Anglo-Norwegian Frigg Field crosses the boundary line between the U.K. and Norwegian sectors of the North Sea. It is an apt symbol of the international flavour of the companies that have developed the field and also of the co-operation between governments that was needed to ensure that the reserves of gas could be brought ashore with the minimum delay. Even with that co-operation the field was still fifteen months behind the original schedule when it came on stream, and by then the original rough estimate of the amount the companies would have to invest offshore to get the field into production had jumped two and a half times.

It was no coincidence that the same group of French companies found themselves with licences on adjacent blocks in the U.K. and Norwegian sectors. The French oil companies, Elf, Total and Aquitaine came together early in the North Sea search to apply for licences, believing that such a consortium would give them a stronger hand in negotiation with governments. They were also among the few companies that had noted the area on seismic maps as holding future potential for exploration. They were one of the earliest consortia to make successful use of the seismic technique known as "bright spot," a sophisticated method by which the presence of hydrocarbons can be detected under certain conditions from the changes in the density of the rocks.

Having made the important decision to share the risks the French group gained licences in the first rounds both in the U.K. sector, in a group headed by Total Oil Marine, and in Norway in a group headed by Elf Aquitaine and including Norsk Hydro, Norway's largest industrial business.

Subsequent development has shown that 60.52 per cent of the field lies in the Norwegian sector and 39.18 per cent in the U.K. sector. The State-owned Elf Aquitaine Group has the biggest share in the Frigg field with a 51.3 per cent interest, the other French company Compagnie Française des Pétroles (CFP) — otherwise known as Total — has a 25.7 per cent share, Norsk Hydro has 20 per cent and Statoil, the Norwegian State oil company, has 3 per cent.

Elf Aquitaine, the Frigg operator, is involved, either with Total or in partnership with others in 33 blocks around the coasts of the U.K. Société Nationale Elf Aquitaine is 70 per cent owned by the French State and is a subsidiary of the 100 per cent State holding company, ERAP (Entreprise de Recherches et d'Activités Pétrolières).

Founded

The companies were founded in the years before the outbreak of World War II, when France was waking up to the need to secure its own supplies of hydrocarbons. As a result of initial exploration carried out in France some gas deposits were developed and in 1945 the Bureau de Recherches Pétrolières was created with a strategy of exploring worldwide, but with special emphasis on colonial territories under French administration.

The most successful early years of exploration were in the 1950s with the major gas discovery at Lacq in south-western France, and others in the Sahara and in Gabon, but which this is at last beginning to generate will be put towards debt repayment. It is expected to be five to six years before the field development starts to show a profit and then the wide interests in exploration Frigg revenues will be used to

and production, shipping, refining and chemicals, where it is an equal partner with Total in Ato Chimie.

Last year the group spent some Frs.8bn. on investment including Frs.1.86bn. on exploration and Frs.3.9bn. on development of wells and acquisitions, two thirds of this in Europe. According to M. Albin Chalandon, chairman of Elf Aquitaine, the development of production will be at an annual cost of Frs.4bn. to Frs.6bn. in the coming years. The group could not finance that sort of effort, let alone exploration costs, without the sort of profitability that at present there was no hope of achieving, he said recently.

Bringing the Frigg Field on stream had cost the field partners some Frs.20bn., of which half had been borne by Elf. The bringing on stream of new resources together with existing developments would give Elf Aquitaine in the early 1980s an annual output of some 20bn. cubic metres of gas and around 16m. tonnes of oil. This contrasts with 1977 production of 11.8bn. cubic metres of gas and 13.7m. tonnes of oil, showing the increasing importance of gas for the company.

The success of last year's exploration efforts alone have added reserves of some 25m. tonnes of oil and 40bn. cubic metres of gas, but the cost has been high at around Frs.60 per tonne of oil equivalent. Over the last two years Elf Aquitaine's capital spending has substantially exceeded net cash flow. The development of the Frigg Field has been the biggest single item and the income from which this is at last beginning to generate will be put towards debt repayment. It is expected to be five to six years before the field development starts to show a profit and then the wide interests in exploration Frigg revenues will be used to

fund new operations, with exploration the top priority.

The group's most profitable discovery has always been the Lacq gas field in Aquitaine which provides 40 per cent of the natural gas consumed in France. Offshore exploration is continuing in the Bay of Biscay, but early hopes have not been realised. The group's main source of crude oil is Gabon and other parts of West Africa including Nigeria, Congo and Cameroon.

Total has suffered many problems similar to those of its French partner in the Frigg development, though it returned to profit last year. Total, the largest oil company in France, ranks among the major international oil groups of the Western world and is in eighth position in terms of production and ninth in refining and marketing. The company's investment in developing production around the world has shrunk in the past 18 months, partly reflecting the coming on stream of wells in Indonesia and the Frigg Field and partly because of its need to reduce the weight of its debt. Its fields in Indonesia are now fully on stream and last year it had the right to some 3m. tonnes of the 11.5m. tonnes lifted.

Total's major crude resources derive from the Middle East, North Africa and more recently Indonesia with the productive discoveries of the Bekapai and the Handil Fields. The acquisition of Hanover Petroleum in North America in 1976 has consolidated the position gained by Total's existing subsidiary and Total now has exploration in most of the U.S. oil States. In the North Sea, apart from its major interest in Frigg, it also has a four per cent interest in the Norwegian Ekofisk Field and it is involved in gas fields in the Dutch sector, both on shore and offshore.

The French companies' major partner in the Frigg development is Norsk Hydro, which has been active in fertilisers and chemicals since 1905 and is now involved in industrial chemicals, petrochemicals, light metals, oil exploration and refining. In the Norwegian sector of the North Sea it has been a partner in the Petronord association with Total and Elf Aquitaine from the start and it now has shares in more than 30 full or part-blocks, including six in which it acts as operator. It has a 6.7 per cent interest in the Ekofisk Field.

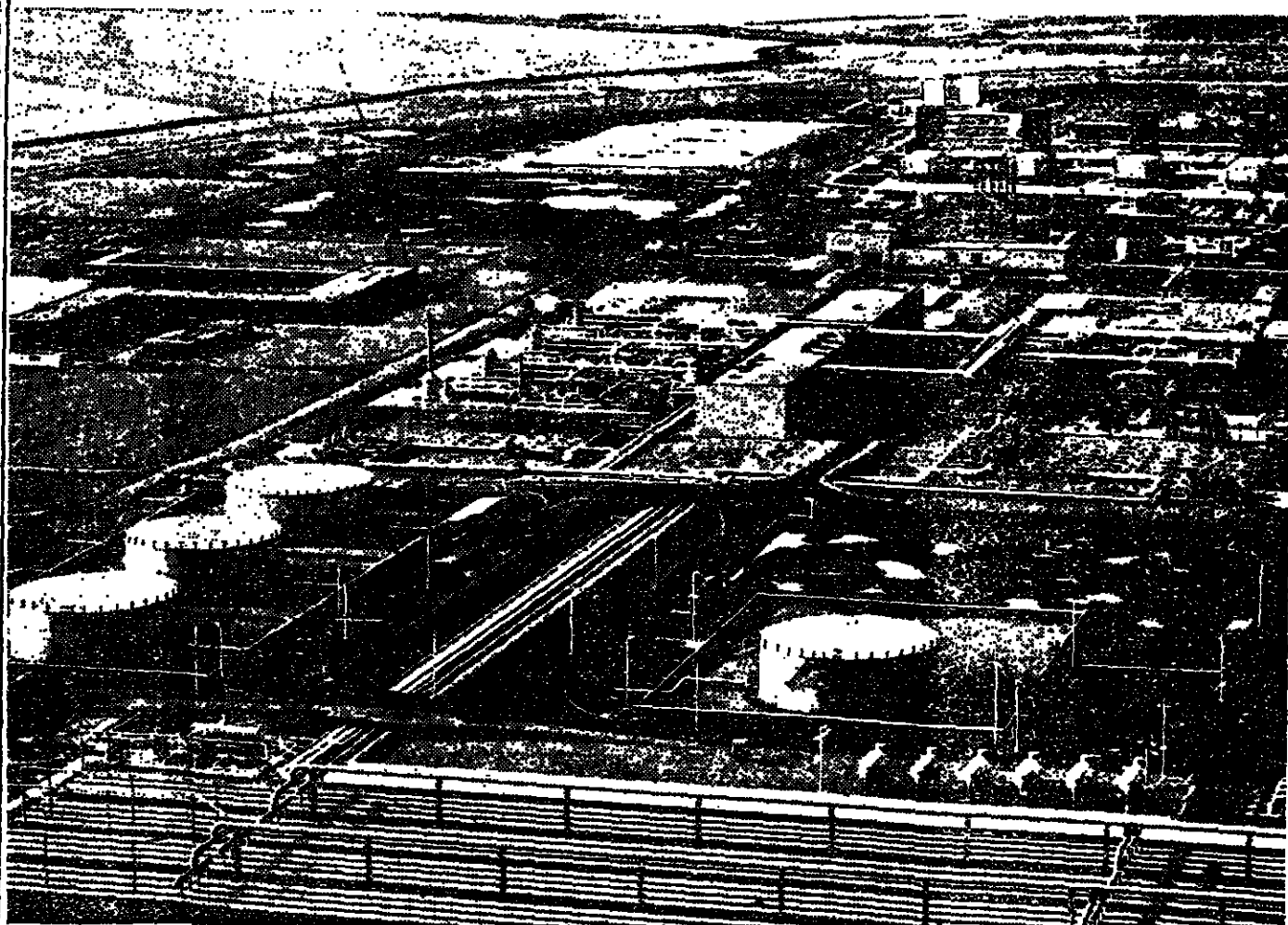
Complex

It was the discovery of major reserves of oil and gas in the Norwegian sector of the North Sea that launched Norsk Hydro, which has a 51 per cent. State interest, into the petrochemicals industry with the building of a new industrial complex at Rafnes. Here the company owns a vinyl chloride monomer plant and has a 51 per cent. share of an ethylene plant and 50 per cent. of a chlorine plant. It also has a third share in three plastics plants that are being built at nearby Rommingen. Condensate feedstock for the ethylene plant is coming from the Ekofisk Field. The recent period of very heavy investment has substantially built up the company's burden of debt, but this should now begin to fall with both the Ekofisk and Frigg fields on stream.

Statoil, the smallest partner in Frigg, was formed by the Norwegian Parliament in 1972 to take care of the Government's business interests in the development of petroleum. It is now the largest single licensee in the Norwegian North Sea with interests in 46 blocks, and it has been a majority partner in all blocks awarded since 1973. Apart from its interest in Frigg, it has a 40 per cent share in Heimdal and a 50 per cent share in the giant Statfjord oil and gas field, the largest discovery in the North Sea, which is now under development. Statoil will also have the main responsibility for petroleum development north of the 62nd parallel, when the Government opens up this northern part of its Continental Shelf.

Kevin Done

MATTHEW HALL — TURN IT ON



Sue Cameron

Communication links

THE OIL industry's demand for efficient offshore communications is expected to grow to a considerable extent over the next ten years in line with increased production rates and improved technology.

In areas such as the Frigg field, where fixed installations are possible, it is tropospheric scatter which provides the links between production platforms, pipeline booster stations and other offshore structures.

The service area that would be covered by the European Communications Satellite would extend from the Atlantic coasts of France and Spain in the south well up into the Arctic Sea in the north. It would extend to the Barents Sea in the east and to Jan Mayen Island and Rockall in the west. One of the problems with satellite systems used for satellite reception in the North Sea is the weather. The antennae have to be able to survive winds of up to 90 mph and temperatures that can cause the sea spray to freeze on impact, leaving an accumulation of ice on the superstructure. It is because of this that the compact antennae required are housed in a radome.

Tropospheric scatter, despite its comparative cheapness, does have limitations on its use — hence the need for communications satellites. Not only does it require a stable reception base: it is inoperable more than about 250 miles out to sea. The Frigg Field, however, is only about 220 miles from the terminal at St. Fergus. The transmission centre for Frigg is at Mormond Hill in South Shetland.

But in some circumstances communications via satellite are the only option and the European Space Agency has pro-

posed that a European Communications Satellite should be built. One transponder of this has already been allocated to the offshore oil industry. Operating in the 11 to 14 GHz bands — that is, super high frequency — this satellite oil service communication service would be fixed and it would serve production platforms, pipeline booster stations and other offshore structures.

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Tropospheric scatter can be used for direct telephone links, for data transmission and for telemetric links. The need for direct phone links is obvious, though an interesting footnote is provided by the Post Office. It proudly points out that workers on North Sea gas and oil platforms can have access to 355m. telephones in 67 different countries — just like their fellows on the mainland.

Telemetry

Most data transmissions are telexed, though it is possible to send and receive information in the form of a dial reading, as a print-out or as a visual display unit reading. The data channels are used for telemetric contact and telemetry is one of the most interesting aspects of offshore communications. It is a means whereby information can be transmitted in digital packages and it is expected that it will make possible an increasing degree of remote control over oil or gas production.

For example, telemetry can be used to open and shut valves. According to Marconi, telemetry is going to be a "growing area."

The development of telemetry emphasises the importance of good communications for production in the North Sea. Any failure can have far-reaching consequences for production schedules and even for the safety of equipment and staff. As far as the people working in the North Sea are concerned, it is clear that communications are also important for sustain-

ing morale. In the Frigg Field there are five major platforms, plus a sixth unmanned flare stack for emergency use. Three of the platforms are in the U.K. sector while the other two are Norwegian. Two of the U.K. platforms are treatment platforms but the third acts as a communications centre and living area. It is physically connected to the other platforms by a bridge and there is no gas on it, so it is "safe" both as an offshore hotel and as a communications nerve centre. The reception transmitter and link-up equipment are housed there.

Although the tropospheric scatter system used in the North Sea was developed and produced by Marconi, it is the Post Office which is responsible for running the transmission stations and maintaining the equipment. The Post Office has a 55m. programme for North Sea communications.

As far as the manufacture of communications equipment for offshore use is concerned, a number of systems will continue to compete for fixed services business as oil production increases. Mr. J. D. Rogers of Marconi Communications Systems points out that companies will have both tropospheric scatter and satellite terminals to choose from. But he adds that in the North Sea at present the low rental of 3 U.S. cents—1.64p—per minute for a tropo voice channel makes this the most economic system for users of fixed services.

Sue Cameron

Marketing

CONTINUED FROM PAGE IV

from the domestic market where a major proportion will be for central heating. A third of the new supply will go to industry and the rest to commercial markets.

The target rate British Gas has set itself for expanding sales is 700m. therms a year for the next four to five years, and this should be sufficient to meet the supply curve that will build up with the extra gas from Frigg and Brent. With other fields still to be utilised, such as the Morecambe Field in the Irish Sea, the Gas Corporation is confident that there are already enough proven reserves to continue sales to the premium market through to the end of the century at the level it will be setting in the mid-1980s of some 18bn. therms a year.

British Gas has kept pushing sales to the domestic market ever since the southern fields came on stream in the 1960s. But in the industrial market it has been a different story. During the early 1970s it bid for the gas from the Ekofisk Field but did not offer a sufficiently attractive price and the gas went instead to northern Germany. The hiatus this

caused in the build-up of supplies, with the wait for Frigg to come on stream, meant that new sales to the industrial market had to be held back for a number of years until the end of 1976.

It started to place gas in the industrial market again late in 1976 but the big sales campaign began in 1977 and will last well into 1979. It has been particularly successful in the domestic market, partly because of the growing price differential with electricity. Domestic central heating is a vital market sector because it counts for 75 per cent of present growth. Decisions taken by local authorities in recent years mean that gas is now taking as much as 80-90 per cent of the central heating market in new council houses, compared with a level of only some 50 per cent up to 1970.

In all, British Gas is now selling 500-600,000 central heating boilers every year, and if this level can be sustained it will provide a new market each year of some 400m. therms, about half of the additional gas available. This is the most important sector of the premium market and will be the easiest to sustain in the next century when the inevitable switch Gas Corporation deal with occurs to substitute natural gas, periods of abnormally high

because it already carries the highest prices. British Gas is confident that room for growth in the domestic central heating market will be present for many years. Even after five years of the kind of expansion it is envisaging half of the country's stock of council houses and a quarter of the domestic market will still be without central heating.

In the domestic market it is electricity prices that provide the competition, but in the industrial market it is more often oil that is the competing fuel. The average domestic price of gas is now 18p per therm, while in the commercial market, where customers are bigger, the price averages out at 17.7p per therm. The commercial market is set to grow at 150m. therms a year and the industrial market at 200m. therms a year. Some threequarters of the industrial sector growth will be in special contract sales rather than in the tariff market, and if this fewer sales will be made on the basis of interruptible contracts. Users that have agreed in the past to take gas supplies on the basis that they can be interrupted at any time have of course been able to buy at considerably lower prices. They have been needed to help the

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demand, but it is now developing other options for flexible supply such as emergency storage, liquefaction facilities and perhaps its own fields, such as Morecambe, which will not be subject to rigid supply contracts. Interruptible sales last year totalled some 2bn. therms, but this market will now be restricted.

The Gas Corporation has also modified its general sales policy for industry in recent years after some uncomfortable experiences stemming from early contract sales in the late 1960s. The most notable lesson came from the biggest industrial contract it ever signed, a 15-year, £250m, 900m. therms-a-year deal with Imperial Chemical Industries signed in 1969. The contract remained virtually unscathed by the OPEC quadrupling of oil prices and has little provision for reflecting the much higher production costs from the northern fields.

The contract was recently renegotiated, but from very low levels, and British Gas is now insisting that industrial contracts are made on no more than a three-year basis. After a year the gas price is indexed to the oil price and contract renewals are only made on an annual basis.

K.D.

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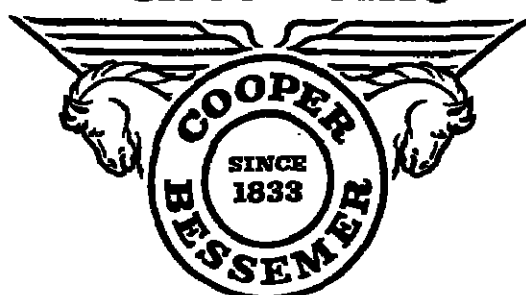
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FRIGG FIELD AND ST. FERGIUS GAS TERMINAL VIII

Catering for good morale

The horses to bring the North Sea's riches home



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ONCE IT settles down to basic operational duties, the Frigg Field will contain something like 340 men working in cramped, dirty and often dangerous conditions. One way for the operating company to ensure that worker morale—and therefore productivity—stays at an acceptable level is for its catering services to be of a high order. In this respect Elf Aquitaine Norge, the operating company for the Frigg Field, has clearly been at pains to minimise any risks.

There are no less than three offshore supply companies servicing the "hotel" contract for the four main installations within the Frigg Field. Two Aberdeen based supply companies are involved, Chalk Drill Catering and the U.K. arm of Norway's Stravanger Catering, Scott Catering and Offshore Supplies. But the largest single slice of the Frigg Field supply service cake has been awarded to CD Catering of Norway, a company whose antecedents go back as far as 1857.

CD Catering (the CD stands for Christiana Dampgokken which means steamkitchen in Norwegian) was absorbed into the Norwegian Farmers' Meat Marketing Organisation in 1963. With its vanguard of ten restaurants in and around the Oslo area, the company has long associations with the catering trade, and was one of the first catering groups to move into the offshore supply business.

Two of the Frigg Field's

operational installations will be supplied by CD Catering, which will mean that the company will be servicing just over half of the 340 workers on operation duty. Its contract extends from supplying food and drink to replenishing bed linen, keeping the rig shop topped up and being responsible for cleaning and supplying the daily dose of new film shows. The company will be staffed by between 35 and 40 offshore personnel working from a pool of around 100 engaged in an eight-day shift system.

Priorities

The company is at pains to point out that one of its priorities in worker relationships is to de-mystify the North Sea. "We need to create an image for the rig worker. He needs to learn to think of himself as just another employee doing a useful job. He has a commuter problem but the rest we think we can overcome."

Part of the trick of normalising life offshore for CD Catering has been to make life on its installations slightly less utilitarian than might be the average for offshore living in the North Sea. The main Frigg Field platform has a bar (though it is still non-alcoholic) something that looks very like a dance-floor and until recently could boast a garden come greenhouse. But perhaps the greatest single influence that CD Catering's offshore technique has so far brought to



Success ultimately depends on the men on the rig.

bear is through the introduction of the female element.

Among the 35 to 40 catering staff and cleaners employed on its two installations at any one time, possibly as many as 15 can be women. The breakthrough for CD Catering came last autumn when a pilot scheme introducing women to rig life was deemed a success by everyone involved. The process of stabilising and lending a homely atmosphere to offshore installations is likely to be extended considerably according to the management team behind CD Catering.

The company's main duties centre on the kitchen where four meals a day are prepared

starting with breakfast, working through lunch and dinner and extending to what CD Catering describes as the midnight meal.

In between, its staff are on hand to supply coffee and biscuits as well as man the shop (news-papers, cigarettes, paper-backs, toiletries) and the library.

Just what an overall supply contract is worth to a catering company no one is saying. But CD Catering were able to provide turnover figures where projections for a full 12 months of normal operational running—once the additional workforce currently adding the finishing touches to the installations has been disbanded—indicate a turnover of Kr.12m. or £124m.

For CD Catering this works out at something like £13.50 per man per day—for the equivalent of four meals with dinner alone extending to a choice of four hot dishes plus a cold buffet, cinema shows, full accommodation and free snacks.

These statistics underline one of the major economic advantages of offshore catering, namely a fixed, captive audience. Catering companies are responsible for purchasing supplies which to a certain extent can be made through the volume buying muscle of what in many circumstances are major catering-orientated parent companies. Thereafter distribution is undertaken by the company responsible for rig operation, leaving the supply group to pick up the thread once supplies are stored "on-board."

On average, rigs take up fresh supplies on a weekly basis—with enough spare capacity in storage in case bad weather causes the supply boats to hold off—and this fixed pattern of events allows a catering company to project its fixed costs forward to a considerable and profitable extent.

Offshore servicing is, however, not all plain sailing. Storage at sea can often be inadequate. On a rig space is at a premium and often the number of working personnel involved will extend beyond the numbers envisaged at an installation's design stage. North

Sea technology has had an uncomfortable habit of running ahead of itself at a very rapid rate.

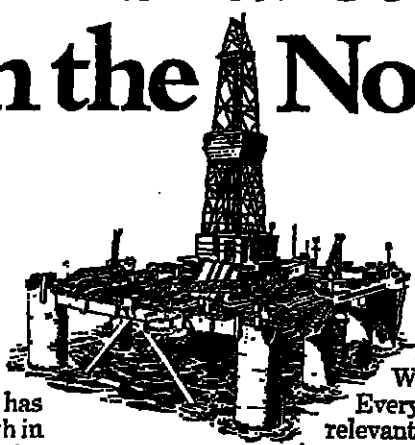
The upshot is that less than perfect storage conditions can pose all sorts of problems for a catering company, especially when the weather turns sour as is so often the case in an area like the Frigg Field which straddles the Norwegian and U.K. sectors of the North Sea, a full 225 miles off the Scottish mainland.

The cramped working conditions found on offshore installations in the Frigg Field are a far cry from those prevailing at its onshore terminals, notably the St. Fergus terminal some 40 miles north of Aberdeen. One of the largest gas treatment plants in the world, St. Fergus is the reception point for the two Frigg Field gas pipelines and the point where the North Sea product is delivered to British Gas.

The terminal is spread over something like 100 acres and has been designed so that it will be able to process up to 40 per cent of Britain's gas requirements. The plant is spacious, airy and remarkably free of people—in stark contrast to the cramped and overcrowded atmosphere prevailing on an offshore rig. So much so that the catering at the British Gas end of the terminal centres on one lady.

Jeffrey Brown

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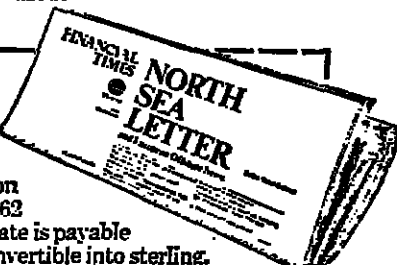
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ONE OF the unique features of the Frigg Field is that it is theoretically possible to operate the six-platform field system from one platform, the quarters platform (QP).

This platform is the nerve centre of Frigg. In addition to housing the field personnel, it contains the central operating and control room for the whole field, telecommunications with Norway and Scotland, communications with vessels and other fields, and the control gear for the production platforms.

Normally QP receives electronic power and fuel from the first treatment platform (TP1). But it has emergency generators and fuel systems to permit it to be completely self-sustained for extended periods, and facilities for shutting-down any of the other platforms should the need arise.

So the field could run for some time with no men on the other platforms. In practice, however, it is unlikely to do so. Drilling crews live and sleep on the drilling platforms and even when drilling of the field's 48 wells is complete a handful of residential staff will remain. But there are no residential staff on the treatment platforms, which can be visited from QP by bridges.

A predominant reason for designing the installation in this way was the need for safety. A representative for Elf Aquitaine, the field operator, describes the Frigg reservoir as "one big bottle full of gas" and points out that gas, because of its volatile nature, is more dangerous than oil.

There is another safety aspect to the design of the installations. Frigg output will build up until it is producing around 30 per cent of Britain's gas needs. It is regarded as highly risky to do this from one platform. Facilities for production and treatment are duplicated to provide alternatives in

the event of a platform shut-down.

Drilling and production will take place on the same platform at the same time, however, a practice not normally regarded as compatible with the highest safety standards. But Elf Aquitaine's engineers are adamant that Frigg's system is up to these standards because of the timing of the operations.

The wells on each platform are divided into two clusters, of 12 each, with a fire wall in between. Before any well perforates the reservoir all 24 are drilled vertically to a depth of 500 metres to prevent a producing well being penetrated by one which is in the course of being drilled.

Hazard

Production and drilling will take place simultaneously for two years. But during that time there will be no need for a major workover on a producing well—the operation that presents the main safety hazard. Maintenance work on the wells will be confined to minor wireline operations only.

Although the control room on QP contains advanced and elaborate monitoring and control systems, they will duplicate visual inspection, not replace it.

Maintenance men will visit the platforms every day to carry out a thorough and continuous inspection programme.

Elf Aquitaine men regard the inspection and maintenance of the topside installations as routine, pointing out that they are not dissimilar to those which have been long in use elsewhere, onshore and off. But under the water, the difference between North Sea structures and others is more significant. They are larger and designed to withstand a far more hostile environment. The concrete structures are fundamentally different.

So the operating engineers have had to develop new programmes to care for the underwater parts of the platforms and emphasise the need for scrupulous thoroughness in doing so.

The vessels on the field include two supply ships, Rig Chief and West Osprey, each capable of delivering 10,000 gallons of water a minute. One of these vessels must be on standby at all times. In addition, the operator has recently taken delivery of the Northern Installer, a multi-purpose monohull vessel, dynamically positioned, with a total water-spraying capacity of 40,000 gallons a minute. It has a 300-ton crane, invaluable if a hyperbaric repair has to be

undertaken, and saturation diving facilities.

When the Northern Installer goes into dry dock, as some day it must, Frigg can, in emergency, call on vessels from nearby fields as a member of the "orange sector" club.

A point on inspection and maintenance which Elf Aquitaine engineers emphasise is the need to minimise the use of divers. They regard saturation diving as expensive and, because of its physiological effects on divers, unlikely to be 100 per cent reliable.

Scouring

All saturation workers are watched by TV at all times and it is the company's policy to reduce diving operations wherever possible, especially on visual inspection work, and eventually to use remote-controlled vehicles (RCVs) for all underwater inspection. At present RCVs are used to check around the platform bases for scouring, particularly the concrete structures, and tests have been made in a Norwegian fjord of the use of similar vehicles for cathodic protection measurement. The test results have received the approval of the Norwegian authorities and RCVs will be used on the field

for this purpose starting this year.

Total, as transportation operator for Frigg, feels that the sound design and construction of its manifold platform and pipeline minimise its maintenance problems. On the platform (MCP-01) the four risers from the two pipelines are in the dry, which reduces maintenance and inspection problems substantially.

The pipelines are buried for most of their length. They have a concrete coating with a steel frame inside it to give weight and protection should any section become uncovered. Zinc anodes every 170 metres are expected to provide protection against corrosion for at least 20 years.

The pipes will be inspected every year from a surface vessel using acoustic side-scan sonar and sub-bottom profiler methods. If this reveals any defects a more detailed inspection will follow, using a submersible.

Using the manifold platform as a pigging station, caliper pigs are sent down the line to check internal measurements, and Total is studying the use of several different systems of internal electronic inspection—the so-called "intelligent pigs."

Bruce Andrews

International spread of contractors

IN PUTTING together the £2bn. Frigg Field development package, Elf Aquitaine and its partners have drawn on a wide variety of fabricators and equipment suppliers. Yards and factories in France, Norway, Sweden and Scotland are among those that have contributed to the project, the largest and most challenging gasfield development so far undertaken in the North Sea.

Equipment costs have been a major factor in the Frigg budget. Wood Mackenzie and Company, the Edinburgh stock-brokers who monitor North Sea trends, estimate that capital spending on the equipment installed in the platforms amounted to some \$530m, compared with just \$445m on the platforms themselves.

At the peak of the hook-up period, the contractors had some 1,800 men working on the field and it was necessary to charter semi-submersible drilling rigs as temporary accommodation platforms.

This was in spite of efforts to carry out the maximum amount of work onshore or in suitable sheltered locations like the Norwegian fjords.

The separate flare stack platform, for example, was virtually complete when it arrived at its location. It is based on a design devised jointly by Elf Aquitaine and Compagnie Francaise d'Entreprises Metalliques (CFEM) and follows tests on a prototype in the Bay of Biscay between 1968 and 1971.

Parts for the base and body of the Frigg structure were manufactured by CFEM at Rouen and Dunkirk before being transported separately for assembly in Stavanger fjord. The completed structure was later floated vertically to its offshore location for installation.

The Concrete Drilling Platform 1 where the drilling modules were the responsibility of the Italian group Saipem.

A French firm, Constructions Metalliques de Provence, undertook the construction at its Dunkirk yard of the 2,000-tonne steel deck which has been installed on the concrete treatment platform at the field, while the 6,000 tonnes of equipment are in modules fabricated by Mercantile Marine Engineering of Antwerp in Belgium.

The accommodation and service modules which are stacked in three levels on the quarters platform, were constructed by Chantiers de la Garonne at Bordeaux.

Most of the Norwegian contribution to the offshore engineering work is concentrated on the combined treatment and compression platform which is a Condeep design constructed by the Norwegian Contractors partnership at Andalsnes in Norway.

It is fitted with a 3,500-tonne steel deck which was manufactured at Stord, also in Norway, by the Aker shipbuilding group while the service facilities on the platform were provided by the French-Norwegian partnership SPIE-Vigor.

The main Swedish contribution to the project was the building of the intermediate manifold compression platform which can control and adjust the gas flow from its location about half way along the route between the field and the shore. The structure of the Howard Doris design similar to Concrete Drilling Platform 1 at the field, was built by Skanska Cementgjuteriet at Stromstad in Sweden.

The 32-inch steel pipelines, which represented the largest single item in the development budget, were bought from Valloire in France and Mitsui, Chiba and Sumitomo in Japan. Coating with a bituminous felt wrap to prevent corrosion was carried out by MK Shand at Invergordon in Scotland.

Laying of the lines was accomplished over three summer seasons using barges provided by Brown and Root, Oceanic Contractors and ETPM. Underwater support for the hyperbaric welding of sections and other operations was provided by Taylor Diving and Comex.

In addition to the barges directly involved in the operation of laying and burying the lines, a diving support vessel and two mini-submarines and their support ships were required during the work. Altogether some 60 supply boats, tugs and pipe transporters were also needed before the lines were completed last summer.

By a Correspondent

St. Fergus Main Contractor

Humphreys & Glasgow was the main contractor for Total Oil Marine's Gas Treatment Terminal at St. Fergus, the largest of its kind in the world. As main contractor, Humphreys & Glasgow was responsible for process and engineering design, procurement, erection and

commissioning. Humphreys and Glasgow also built and operated the Grimsby Construction Camp for 400 men.

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Ray of moonlight on the 'hidden' economy

IT IS just possible that Britain is surviving the growth of the State by ignoring it. That is the Italian way, and it is not necessarily a bad one. On paper, Italy is unworkable. Its economic statistics in all ways its best years suggest that it is on the verge of collapse. Yet the Italians seem to provide their own private network of arrangements, independent of State subsidies or taxation. If only some one could catch them at it and compile the relevant national tables their real economy would no doubt look a great deal more vigorous than the one we see on paper.

The idea that the same thing might be happening right here in Britain is gradually beginning to dawn on a number of economists. To the ordinary eye, it certainly looks as if many people are doing rather better than our gloomy economic tabulations indicate to the ordinary eye. The amount of barter, or under-the-counter, or VAT-evasion business that is taking place seems to have grown in recent years. The problem is that, by definition, there is no way of proving it.

Statistical

Even so, try this for size. On page 17 of the National Income and Expenditure 1966-1976 compilation published last autumn by the Central Statistical Office (HMSO £3.95) there is a table entitled "Index numbers of gross domestic product and gross national disposable income." These numbers come from our annual production and consumption in eight different ways, and it is interesting to compare the first two of them.

The very first bases its index on expenditure. The second is based on income. In 1955 the Italian way, and it is not necessarily a bad one. On paper, Italy is unworkable. Its economic statistics in all ways its best years suggest that it is on the verge of collapse. Yet the Italians seem to provide their own private network of arrangements, independent of State subsidies or taxation. If only some one could catch them at it and compile the relevant national tables their real economy would no doubt look a great deal more vigorous than the one we see on paper.

For the next 18 years, until 1973, the match stayed nearly as good as that. Not until that year did it rise as high as a 1.6 difference, and the average over the entire period was a mere 0.9 discrepancy.

Then, suddenly, it rose to 3.1 in 1974. Taking 1970 as equal to 100, the gross domestic product at factor cost in 1974 was 169.8 if based on expenditure data and 166.7 if based on income data. Were we becoming more cagey about our earnings?

Not necessarily. This 3.1 difference might have been a flash-in-the-pan. After all, it was difficult to get such measurements right in the year immediately following the quintupling of the price of oil. But the following year the difference was 2.9—still more than twice the 18-year average. In 1976, according to figures revised by the Central Statistical Office since the table from which I have been quoting was published, the discrepancy was higher than ever—4.7. Last year it was "down" to 2.6, but this is still subject to revision. In every recent case the "spending" index has been that much higher than the "earning" one.

It would be foolish to build anything much on this curious



statistical fable. After all, the instability of currencies over the past four years has made the calculation of precise import prices difficult, and much of our spending goes on imports. The rapid rate of inflation over these years also made the match harder to achieve.

Yet the Government statisticians do try to take account of "unofficial income from employment" by adding a bit in, using their best professional judgment. They have control figures—the index based on output, which does not seem so wobbly—and they are not blind to what goes on in the world. If this is so, then the larger discrepancies between the expenditure count and the income count over the past four years must mean one of two things. Either the relatively more unstable world has multiplied the number of gremlins in the counting system, or they are not "adding on" enough to com-

pensate for the Italian side of our nature. For the time being we can leave the official figures at that. The Government statisticians are looking at "perks" and "addies" as a matter of top priority, and we must hope that they find a useful means of measuring (a) their place in the economy and (b) whether their use really is growing.

Fiddles

Arguments in favour of the proposition that the unrecorded part of our daily business is becoming more important can be found in "Policing the Hidden Economy—The Significance and Control of Fiddles," which has just been published by the Outer Circle Policy Unit.

It begins by reminding us that in socialist societies "the rigidity of central planning creates the need for alternative informal arrangements to facili-

tate production, and the control and rationing of consumer goods creates unofficial markets." One writer has estimated that as much as a fifth of Soviet economic activity can be accounted for in this way.

In Britain, perhaps half our economic activity is controlled or influenced by public officials. Even in the market sector, Government control and regulation for tax, public order, health and other purposes is already extensive," says the Outer Circle Policy Unit.

Taxation, it goes on, has become an instrument of economic management in general and incomes policy in particular. "We have therefore at least in embryonic form the conditions which encourage systematic collective fiddling." This process includes taking second jobs—"moonlighting"—as well as pilfering from employers, tax avoidance and tax evasion, and the well-known propensity of plumbers, painters, and other small tradesmen to break out in

a rash when offered anything but cash for their services. The unit defines it all as "The Hidden Economy," but on reflection it is really pretty visible.

Yet how much is it worth to the economy? The new pamphlet looks at one item in the necessary equation and by taking such published evidence as exists, and slicing it all down in favour of a conservative approach, comes out with a current annual £1.3bn. lost on pilferage from employers, petty cheating of customers, and police time.

If one had but the means it would be more instructive to calculate the value of cash and barter transactions ("£100 if it's cash, £150 if it's a cheque, or 'I'll do it for half a dozen bottles of whisky") to the economy as a whole. The official index of output is probably as accurate enough in its count of goods, but its count of services is just as likely to be way out. The unit's report suggests that "fiddles" are part of the ordi-

nary life of building workers, the hotel trade, journalism, and other easily definable areas; in most cases it is services rather than goods that are involved, wrong with this approach. Let us take it that what many people assume to be true really is true—that the British are becoming less honest about tax returns, and more conscious of the advantage of private arrangements for increasing personal incomes.

If this is so then what is of prime importance is not how to control it, but why it has happened. And of course the answer is hardly a mystery. Taxation has become too onerous, even for the worker on or possibly below the national average wage. A succession of incomes policies has made the possibility of escaping from this drear trap even harder. An extra £5, or 24 a week can be a sour joke when much of it is taxed away. The right analytical stance, therefore, is to find out, first, how much of the supposed growth in the "Hidden Economy" can be quantified and then, second, to delineate the lines behind which Government should retreat in order to ease the burden of State intervention and taxation. If the State were less of a presence, and less costly, the need to find means of escaping its clutches would be that much less felt. The alternative is that Britain may become so much more like Italy that we will begin to suffer some of the Italians' chaos, even while everyone is making the best life possible out of a series of deals with friends and acquaintances.

The lump

It will be seen that once on the trail of this line of thought, various apparently different phenomena may be mixed together—tax avoidance with the "lump", petty theft with "moonlighting". Since the law is arbitrarily applied (some employers prosecute, some do not) this apparently odd mixture is more sensible than it may seem. And the fundamental point is not so much "what is legal?" as "is it growing?" and "why?"

The general tenor of the unit's report is that fiddling is something that may be growing and should be stopped. It devotes much space to the private security industry. This is not out of tune with the Government's attitude, which seems to be to react by increasing the penalty for tax avoidance (and making the rules retrospective, if Parliament passes that bit of Mr. Healey's recent Budget), while encouraging the inland

Joe Rogaly

*Obtainable from 4 Cambridge Terrace, Regents Park, London, NW1 4JL.

Letters to the Editor

Railway investment

From Mr. Ralf Bonwit.

Sir,—By setting out alternatives for railway investment during the remaining decades of this century, Mr. Peter Parker may have provided a consistent policy will be followed by whatever Government is in power. He may also have persuaded those responsible for overall transport planning to avoid a repetition of the mistakes of the 1955-66 period, when a comprehensive modernisation and electrification programme was abandoned midway, diesel superseded electric traction projects on all but two trunk lines, the creation of a modern wagon fleet was postponed, and an unfinished modernisation programme was disrupted by the Beeching cuts—carried out after an appraisal of railway economics which should have preceded the modernisation programme in the first place.

The need to replace soon many of the existing diesel and electric multiple units will provide an opportunity for assessing the relative primary and maintenance costs of these two forms of traction and their relative operational and traffic-creating benefits against the relatively high initial cost of overhead and feeder line installation. The French railways have found that the extra cost of trunk line electrification is usually recouped within 5-8 years through operational savings. To shrink from further electrification on the scale proposed by the Railways Board—which would not raise the proportion of our electrically-hauled traffic above the Continental average—would prove a false economy in the not very long run, quite apart from the dangers arising from an overall transport provision based on oil. It would also be desirable to concentrate the necessary work on the 1980-90 period, when our supplies of oil and other raw materials such as steel will be abundant, using railway electrification as an anti-cyclical depression corrective; this would be better than to be caught out by a worldwide oil shortage at a time when the economy—our fervently hope—will be fully stretched.

It is only too easy to see the high initial outlay on a major transport project as a barrier to its implementation—as the Secretary of State for Transport did when he ruled out a revival of the Channel Tunnel project on such grounds. In fact, a refusal to contemplate the relevant expenditure will result in no real savings over the next 20-30 years, since the aggregate cost of the replacement of ferry ships, the expansion of Channel ports and the creation of new adequate access roads will equal the cost of the Tunnel. This was the conclusion of the Cairncross Report. And Cairncross did not include the cost of a third London airport plus feeder roads and railways which will have to be built, if the growth in short-distance air traffic cannot be mitigated by the creation of direct rail links to the Continent. Here, again, discounted cash-flow considerations should not be allowed to overrule the needs of predictable traffic flows.

Ralf Bonwit, Sorby, Killy Lane, Henley-on-Thames.

The Australian economy

From Mr. K. P. Baxter.

It is important to recognise that the OECD report about Australia probably provides an inaccurate picture about the real state of affairs because the OECD officials visiting this country have been given unfettered access to all sections of the Australian economy.

The views expressed in the report are basically those of the Australian Treasury which appears to believe that further progress will be achieved by further cuts in government expenditure, rather than by a more realistic approach to the problems of unemployment and sluggish domestic demand.

The present Government has succeeded in reducing inflation. It has done so mainly due to substantially increased unemployment, increased tariff and non-tariff barriers and slackening investment in demand-creating industries. It has been helped by the fact that import prices continue to decline in real terms. It has not been faced with the rapid escalation in oil and other commodity prices which confronted the Labour Government which came to power in 1972.

There have been substantial overseas borrowings to prop up the Australian dollar and the Federal Budget deficit for the 1977-78 financial year will be substantially over the \$2.3bn. for which the Government was aiming.

While there is no desire to decry the basic strengths of the Australian economy, the Government, no matter what political complexion, should not be afraid of an accurate impartial report on its economic affairs. It is regrettable to say that the present Australian Government does not insist that it should have open and unrestricted access to all the sources of information which would enable it to assess the real economic situation in Australia.

K. P. Baxter, 87 Ballarat Street, Fisher ACT, Australia.

Leasing benefits

From Mr. M. P. Gould.

members. Indeed those delinquent companies still anxious to sell their leasing contracts on the tax-free benefit motivation might perhaps wish to spend a little time studying the possible effects on their own tax position. The Revenue may wish to take them to task utilising the provisions of Section 44(6) Finance Act, 1971. This section is concerned with the disposal value to be taken into account where the sale takes place at less than market value and the purchaser is not entitled to capital allowances. They may further wish to consider the possibility that certain more adventurous agreements may result in the vehicles being treated as stock-in-trade thereby prohibiting entitlement to a first year allowance.

M. P. Gould, Johnston House, 8, Johnston Road, Woodford Green, Essex.

Bureaux de change

From the Marketing Manager, Chequepoint Services.

Sir,—In our recent letter to your newspaper we challenged Mr. Rost, MP, to produce his evidence supporting his allegations that some bureaux de change charge 20 per cent. He has yet to do so.

As one of the pioneers of the bureaux de change business, we at Chequepoint feel a certain obligation to defend the business against unbalanced or spurious criticism.

Until recently bureaux de change facilities were a peripheral activity operated by the clearing banks in a somewhat cavalier fashion. To-day if customers now have a choice of service (which within an hour extends to 24 hours a day) we would like to think that Chequepoint was instrumental in its creation. The maintenance of this service is not without problems and not unreasonably West End rents and 24-hour staffing are costly. Nevertheless the average London bureau de change operates on what must be some of the smallest margins in the retail sector and Mr. Rost's allegations of 20 per cent. are doubtful. Of course, fluctuations occur and these are not confined to the bureaux de change business. Unfortunately misguided thinking can occur within the business as Mr. Stibbe's recent letter to yourselves clearly shows. Mr. Stibbe proclaims his ability to "thrive" charging a flat 25p for cashing cheques and criticises our charge of 4p in the £ as "excessive." In fact Mr. Stibbe, operating in Dover, is more expensive on any transaction up to £5.25 than Chequepoint's 24-hour service in Leicester Square. As these transactions are a substantial proportion of our business, Mr. Stibbe must do very well using his rate of 25p on his Dover overheads.

M. A. Jordan, 47 Old Brompton Road, SW7.

Inflation accounting

From Mr. D. R. Myddleton, Professor of Finance and Accounting, Cranfield School of Management.

Sir,—It is very well for Mr. M. Speer (May 6) to talk about the need for accountants to develop a greater tolerance for imprecision. But I find it hard to tolerate the imprecision in the first sentence of his letter where he attributes to me views which are the exact opposite of those I hold. My letter (April 18) said: "Adjustments based on a general index of constant pur-

chasing power are both necessary and sufficient to allow fully for inflation." Mr. Speer says he "perhaps wish to spend a little time studying the possible effects on their own tax position. The Revenue may wish to take them to task utilising the provisions of Section 44(6) Finance Act, 1971. This section is concerned with the disposal value to be taken into account where the sale takes place at less than market value and the purchaser is not entitled to capital allowances. They may further wish to consider the possibility that certain more adventurous agreements may result in the vehicles being treated as stock-in-trade thereby prohibiting entitlement to a first year allowance."

In the past ten years the purchasing power of the pound has fallen by about two-thirds. Hence the urgent need for inflation accounting. If there were no inflation, there would be no need for inflation accounting; but the arguments in favour of current cost accounting (as opposed to historic cost accounting) would be unaffected.

D. R. Myddleton, Cranfield, Bedford.

Responsibility of NEB

From Mr. David Stebbings.

Sir,—In your leader (May 5) you say it does not necessarily follow that an agency such as the NEB should become a giant holding company with a Government responsibility for supervising such investments as Leyland and Rolls-Royce. Is it not so that business is too important to be left to the politicians? I would suggest that if our international industries had been insulated from political interference by a board largely of businessmen (and I include trade union leaders) such as the present NEB, we would have fared very much better. Sir Leslie Murphy's use of the expression "bridge" seems very apt in describing what is needed to sift and translate the pressures of political expediency into the longer term needs of business confidence.

David Stebbings, 1 Wapping Riverside, Wapping High Street, E1.

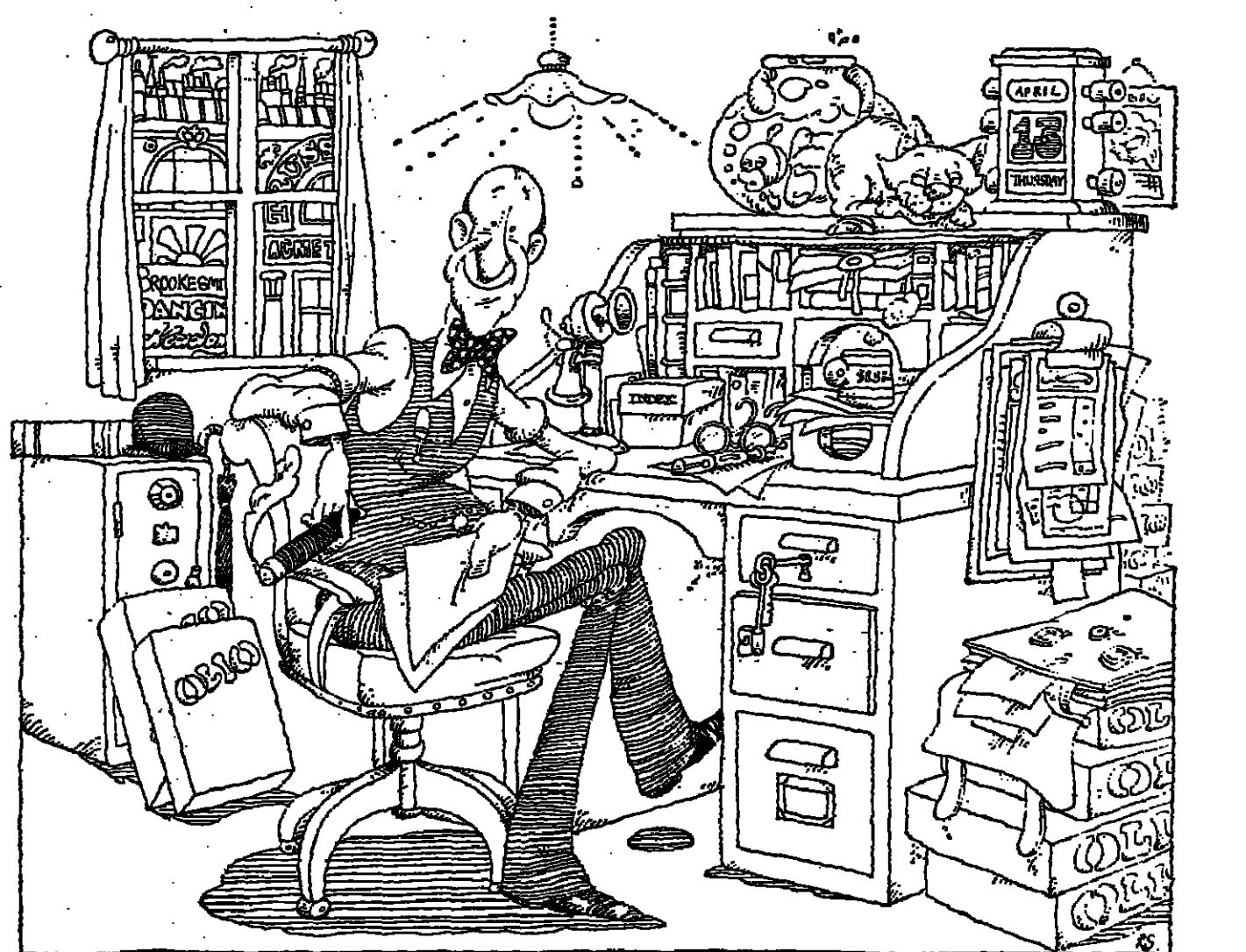
Causes of unemployment

From The President, Birkbeck College Students' Union.

Sir,—David Everley (April 26) in outlining "the case for sharing the burden of unemployment" floats once more the old canard about decreasing unemployment by reducing the working day/week/year. In fact, the average number of hours worked per man in industry has hardly changed since the day of the ten hour day before the First World War. What has changed is the proportion of hours worked at normal rates as opposed to hours worked on overtime. The reasons behind this are fairly obvious. As long as it is to the employers' advantage to work employees for long hours (this is explained by Karl Marx in Volume I of Capital) and as long as workers are under financial pressure, as they will continue to be in a period of recession and inflation, it is unlikely that the two will agree on work-sharing with the unemployed. The real causes of unemployment are in fact business cycles and economic crises. Work-sharing is just another way of avoiding dealing with the fundamental economic and social problems in our society. J. Toporowski, Birkbeck College, University of London, Malet Street, W.C.1.

To-day's Events

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| GENERAL EEC Agriculture Ministers end two-day meeting, Brussels. European Central Bankers end two-day monthly meeting, Basle. European Parliament in session, Strasbourg. CSI Industrial Trends Survey (April). Mr. Eric Varley, Industry Secretary, holds talks with president of Boeing on U.S. aircraft industry's offer of collaborative programmes to U.K. aerospace industry, prior to similar meetings with presidents of McDonnell Douglas and Lockheed. The Queen inaugurates St. Fergus gas terminal. Financial Times two-day 1978 Euromarkets Conference ends. | ROYAL LANCASTER HOTEL, W2. Industrial Society conference on Profit Sharing—Employee Share Ownership, at Quaglin's, S.W.1. Speakers include Mr. Robert Sheldon, Financial Secretary to the Treasury, and Mr. Nicholas Goodison, Stock Exchange chairman. European Computing Congress and Exhibition opens, Wembley Conference Centre (until May 12). International Diecasting Exhibition opens, Olympia (until May 12). | PARLIAMENTARY BUSINESS House of Commons: Wales Bill, third reading. House of Lords: Scotland Bill, committee. Tuvalu Bill, second reading. Select Committee: Scottish Grand Committee considers Community Service by Offenders (Scotland) Bill (10.30 a.m., Room 14). | COMPANY RESULTS Avery's (full year). Bank of Ireland (full year). Richard Costain (full year). Lesney Products and Co. (full year). Mullins-Denny (full year). Smith and Nephew (Associated Companies) (first quarter figures). | COMPANY MEETINGS American Trust, Edinburgh, 12.15. Scitex Aluminium, 7, Baker Street, W. 10.30. Federated Land and Building, Winchester House, E.C.1, 12, Law Land, Howard Hotel, W.C.1, 12.15. Lyon and Lyon, Knowlton, West Yorks, 12.15. Trade Indemnity, 12.34, Great Eastern Street, E.C.4. United Biscuits, Edinburgh, 12. Zenith Carburettor, Stanmore, Middlesex, 12. |
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INTERNATIONAL FINANCIAL AND COMPANY NEWS

NORTH AMERICAN NEWS

Gannett and Combined Communications merger

BY JOHN WYLES

A NEW power in the American broadcasting and newspaper industry emerged this morning with the announcement of a merger agreement in principle between Gannett Company and Combined Communications.

The proposed deal, based on a share exchange valued at around \$870m, would create one of the largest newspaper and broadcasting companies in the U.S. Although the Justice Department's Anti-Trust division said this morning it would take a preliminary look at the agreement, the merger does not appear on the surface to conflict with the department's view that combination should be discouraged between companies competing in the same geographical markets for advertising.

However, today's announcement said that the need to comply with Federal Communications Commission rules on limits of ownership, meant that they would sell one of six VHF television stations owned by the new joint company, while Combined Communications would sell its Phoenix radio stations.

Both Gannett and Combined Communications have shown themselves to be rapidly growing, acquisition-minded companies in the last few years.

Combined Communication's earnings have leaped from \$8.8m in 1973 on sales of \$89.8m, to \$20.6m on sales of \$238m last year. In the same period Gannett's earnings have risen from \$28.8m, to \$89.5m, and its sales from \$297.4 to \$597.9m.

The two companies said today that Board approvals in principle were voted at special meetings yesterday, but the deal was still subject to a definitive agreement, the consent of lenders, tax rulings, shareholder approval in both companies and Government approvals for the transfer of broadcasting licences.

The combined sales of the new company will be higher than any other comparable newspaper and broadcasting company. Gannett publishes 77 daily newspapers in 30 states and two U.S. territories. It owns newspaper interests, the international research firm of Louis Harris and Associates, a television station and a radio station. Combined Communications operates in 11 states with seven television stations and 13 radio stations. It publishes two metropolitan daily newspapers, the Cincinnati Enquirer and the Oakland, California, Tribune. It also has outdoor advertising facilities in the U.S. and Canada. Most of Gannett's newspapers

serve small and medium-sized communities and tend to have few publishing rivals for local advertising.

American Financial Corporation, an Ohio-based financial holding company, said today it would vote its 1.5m shares in favour of the merger.

Liberty National amends terms

BIRMINGHAM, May 8.

AT THE request of Equitable General Corporation, Liberty National Life Insurance is to hold open until the close of business on Thursday its proposed offer to acquire by merger shares of Equitable General for \$40 cash per share. Liberty National stated that it had been informed that Equitable General will call a meeting of its Board of directors this week to act on the Liberty National proposal.

The Liberty National offer will also allow those shareholders desiring installment sale treatment for income-tax purposes to take \$3 per share. Liberty National instalment notes aggregating \$50 per Equitable General share.

Strong rise at ENSERCH

WASHINGTON, May 8.

ENSERCH Corporation said a foreign subsidiary it acquired earlier this year helped to make "possibly questionable payments" to employees of a foreign Government in the past two years.

In a report filed with the Securities and Exchange Commission, the Dallas-based diversified concern said a joint venture in which the subsidiary participated made 10 payments totalling \$84,000, since ENSERCH acquired it and 23 payments amounting to \$172,000 before the purchase.

The subsidiary, the country in which the payments were made and the recipients were not identified. The ENSERCH unit made 50 per cent of the payments, the report said.

In Dallas the company declined to discuss the report. According to the report filed with the SEC, the payments were made in connection with contracts totalling \$10.8m, which resulted in a net loss for the unit acquired.

For the last quarter of the year, ENSERCH reports an increase in net profit from \$25.6m for the same period last year to \$34m, or from \$1.42 to \$1.90 per share. This was accomplished on sales up at \$811m, from the \$404m, last time. The per share figure is reckoned prior to a three-for-two stock split which became effective on April 21.

Adjusted to reflect the split, the per share comes out at \$1.26 against 95 cents.

U.S. ALUMINIUM PRODUCERS

A warm welcome for imports

BY DAVID LASCELLES IN NEW YORK

AT A time when most industries are being distinctly cautious about their prospects, the North American aluminium industry stands out for its optimism. The industry's leaders have even gone on record as saying that they welcome more imports of aluminium because they cannot hope to meet demand themselves.

This optimism shone through the quarterly reports from the four aluminium giants earlier this month. The message was that although the winter had proved difficult because of strikes and the weather, demand was strong and likely to grow stronger. If there were losses (as in the case of Reynolds) these were put down to technical translation, and not to problems in the industry itself.

The industry bases its faith on growing acceptance. U.S. consumption of aluminium has been rising at about 9 to 10 per cent annually since 1975, while national production has been rising at some 5.5 per cent. The demand growth has brought capacity utilisation from 78 per cent, in 1975 to 88 per cent last year.

Mr. W. H. Krome George, chairman of Aluminium Company of America, the largest producer, said at the company's last annual meeting that the pressures to increase prices in the aluminium industry will be no different from those for steel, plastics, copper or other competing materials. Aluminium, therefore, should have a good competitive position in a number of high volume markets.

The industry also believes that the aluminium market will broaden because the metal's versatile qualities (weight, conductivity, resistance to corrosion) become more attractive as other resources such as energy become

scarcer. Aluminium is also easily recycled, eliminating much waste.

Perhaps the most gratifying development is the broader use of aluminium in the automobile industry due to the need to reduce petrol consumption.

According to Kaiser Aluminium, its use in cars has increased by 35 per cent, in the last three years. In 1978 each U.S. car produced will contain an expected 115 lbs of aluminium.

As a result, Merrill Lynch estimates, energy costs as a percentage of revenues are about the same for aluminium and steel.

If the aluminium industry is concerned about energy, it does not show it. When it comes to resources, it is more worried about supplies of bauxite, the raw material on which aluminium is based.

At present over 90 per cent of the bauxite used in the U.S. is

imported, mainly from Latin America. But problems related to politics and pricing have made these supplies less secure, and the big companies are turning to new suppliers like Australia. Aluminium recycling is also increasing. Last year Alcoa said that it recycled 94m. lbs of cans, equivalent to the output of a whole smelting line, but at a saving of 85 per cent of the energy needed to produce the metal from scratch.

But perhaps the greatest concern in the medium term is that the industry will simply not be able to meet demand.

A large increase in U.S. production capacity will come from a U.S.-Japanese joint venture called Alumax, linking Mitsui with Amx, the successful U.S. mining concern. In view of the expected continuing rises in aluminium prices, the two companies plan to invest some \$500m in plant able to produce over 250,000 tons a year by 1982. Together with Amx's existing capacity, this would bring

Alumax up to fourth place in the U.S. league, directly behind the first three giants, Alcoa, Reynolds and Kaiser.

Nevertheless, Mr. Cornwell Maier, president of Kaiser Aluminium, told the recent annual meeting that the availability of supply was in his opinion, the only serious restraint on greater aluminium consumption.

According to Kaiser estimates, he said, aluminium production capacity in the U.S. will grow by only 1 per cent a year up to 1982, and in the whole of the rest of the Western world by only 4 per cent over that period. "Because of the long lead times required to build new capacity, the likelihood of a very tight aluminium supply-demand situation in the not-too-distant future seems fairly certain," he said.

Although remarks like these have been criticised as attempts to talk up prices, no one has denied the general implication. Imports of aluminium (as opposed to bauxite or alumina) have risen steadily to the point where they now account for about 10 per cent of domestic supply. The home industry believes that these imports must continue to rise in order to encourage the use of metal.

This view makes a sharp contrast from that of the steel industry, which has been clamouring for an end to cheap steel imports. But the big difference is that while the U.S. steel industry is a high cost producer, the U.S. aluminium industry is still among the world's lowest cost producers. This not only means it can tolerate imports, it also expects these imports to raise the price of aluminium on the domestic market, thereby increasing its own profitability.

Seven-Up urges bid rejection

BY STEWART FLEMING

THE BOARD of Seven-Up has advised its shareholders to reject the \$440m takeover offer for the nation's third largest soft drinks producer from the tobacco and beer giant Philip Morris.

Last week Philip Morris announced a \$41 share offer for Seven-Up only to have the company say that it did not expect shareholders owning over 45 per cent of the stock, who were related to the families

for Seven-Up shareholders, involving the founding families. Mr. Ben Wells, the Seven-Up chairman, said that based on assurances "given to me by members of the Board, their relatives and trusts of the company's founding families and other closely held interests," he was confident that 51 per cent of the company's stock would not be tendered for the Philip Morris offer.

Champion Spark

Champion Spark Plug says that because of an error in calculating inter-company sales it overstated first-quarter sales in its release of those results. AP-DJ reports from Toledo, The company said the first-quarter 1978 sales were \$189.5m, instead of \$202.3m, as it had announced. Net income figures for the quarter were not affected, the company added.

New scheme at Peat Marwick

By Michael Lafferty

PEAT MARWICK MITCHELL, the worldwide accounting concern, is to set up a new international partnership in which all PMM partners around the world will be members.

Up to now national PPM partnerships have only been brought together by co-operation agreements, in what might roughly be described as a partnership of partnerships. The new scheme means that each Peat Marwick partner will be a member of an umbrella partnership called Peat Marwick International, as well as an individual national partnership.

The international partnership will not trade and will be registered in Switzerland, its secretariat, on the other hand, will be based in Canada, which supplies PPM's first secretary-general, Mr. Walter E. Hanson, chairman and chief executive of Peat's in the U.S., will be PPM's first chairman.

White Weld bond trading team to join E. F. Hutton

BY NICHOLAS COLCHESTER

MOST of the international bond trading team of the London office of White Weld, the American investment bank, is to join the international arm of another Wall Street bank, E. F. Hutton.

The move, announced by the Geneva office of E. F. Hutton yesterday, follows the takeover of White Weld by Merrill Lynch Pierce Fenner and Smith. It is also understood that Mr. Stephen Rose, the manager of White Weld's London office, is to leave, although his next employment is not known.

Late last week it was announced that Mr. Gary Shilling, the senior economist of White Weld in the U.S., had resigned. This news was the first concrete sign of the widespread belief that Mr. Shilling, who had followed Merrill Lynch's White Weld, and has since been exploring

the possibility of continuing with Shilling, the senior economist of Credit Suisse but in vain. It is understood that Credit Suisse White Weld will retain its current name despite the fact that it will be severing its ties with Merrill Lynch-White Weld.

George Weston well ahead

TORONTO, May 8.

FOLLOWING through on its optimism at the year end, George Weston, the major Canadian foods to forest products group, reports a 250 per cent rise in first quarter net profit to \$C7.7m, (some \$US6.8m), on a sales rise from \$C1bn, to \$C1.1bn, (\$US976m).

This brings the net per share from 17 cents for the first period of last year to 55 cents for the first quarter of this year.

Over the previous full year, the company managed to pull profits up from the \$C16m. of 1976 to \$C27m.

Petrol licence fee to rise

LICENCE fees for storing petrol will be increased from July 1 under Regulations laid before Parliament yesterday.

EUROPEAN OPTIONS EXCHANGE

| Option | Price | Close | Vol. | Open | High | Low | Settle | Expiry |
|---------|-------|-------|------|------|------|-----|--------|-----------|
| K. 1000 | 140 | 121 | 1 | 131 | — | 131 | — | \$52 1/2 |
| K. 1000 | 145 | 83 | — | 91 | — | 91 | — | — |
| K. 1000 | 145 | 41 | 3 | 51 | 15 | 71 | 18 | — |
| E. 1000 | 140 | 11 | 41 | 51 | 31 | 31 | 45 | — |
| G.M. | 200 | 141 | — | 141 | — | 141 | — | \$63 1/2 |
| G.M. | 200 | 4 | — | 5 | — | 5 | — | — |
| G.M. | 200 | 2 | 1 | 14 | — | 14 | 2 | — |
| IBM | 240 | 26 | 1 | 29 | — | 31 | 4 | \$262 1/2 |
| IBM | 240 | 111 | 4 | 9 | 7 | 17 | 4 | — |
| IBM | 240 | 2 | — | 2 | — | 2 | — | — |
| Verizon | 130 | 24 | — | 13 | — | 27 | 2 | \$348 |
| Verizon | 130 | 14 | 9 | 19 | — | 19 | — | — |
| Verizon | 130 | 9 | — | 9 | — | 10 | 20 | \$177.30 |
| Verizon | 130 | 4 | — | 6 | — | 5 | 180 | — |
| Verizon | 130 | 10 | — | 12 | — | 3 | 1 | \$108.20 |
| Verizon | 130 | 4 | — | 4 | — | 4 | — | \$26.80 |
| Verizon | 130 | 1 | — | 1 | — | 1 | — | — |
| Verizon | 130 | 0.6 | — | 0.6 | — | 1.0 | — | — |
| Verizon | 130 | 0.6 | — | 0.6 | — | 0.6 | — | \$127 |
| Verizon | 130 | 1.9 | — | 1.9 | — | 2.0 | — | — |
| Verizon | 130 | 0.2 | — | 0.2 | — | 0.2 | — | \$115.60 |
| Verizon | 130 | 1.2 | — | 1.2 | — | 1.2 | — | — |
| Verizon | 130 | 0.2 | — | 0.2 | — | 0.2 | — | — |

Vickers to decide soon

BY ROBERT GIBBENS

MONTREAL, May 8.

Canadian Vickers the Canadian nuclear component, steel products and ship repairing company, says a decision will be made on the bid for control of the company by Thursday morning.

Canadian Vickers confirmed that the unidentified Canadian group making the bid is negotiating with the parent company in London.

The parent owns 72 per cent of Canadian Vickers, a leading

CAE deal with Montupet

BY OUR OWN CORRESPONDENT

MONTREAL, May 8.

A JOINT company to produce aluminium alloy diecast engine parts has been formed by CAE Industries, of Montreal and Toronto, and La Societe Industrielle et Financiere Montupet of Nanterre, France. CAE-Montupet Diecast is 80 per cent owned by CAE and 20 per cent by Montupet, and first production from the plant at St. Catharines, Ontario, is expected late this year. The total amount of the investment is \$C7.5m. CAE will provide the finance and management, and Montupet the technical know-how. CAE is best known for its electronics products, but is also in the zinc castings business.

CAPITAL MARKETS
Dollar sector weakness continues

By Mary Campbell

THE dollar sector continued to weaken yesterday, while the D-Mark sector marked time. One new dollar-denominated issue was announced—\$75m. for Occidental Petroleum. In the D-Mark sector, the Industrial Bank of Japan's offerings has now been launched, as has a private placement for the City of Johannesburg under South African Government guarantee.

The terms of the Occidental Petroleum issue, include an indicated coupon of 8 1/2 per cent, on a seven year maturity. A purchase fund will operate to support the price if it falls below par in the second, third or fourth years. The underwriting syndicate is headed by Dean Witter, Reynolds International, Kidder Peabody and Blyth Eastman Dillon. Kidder had traditionally been lead manager for Occidental offerings but did not appear in the management group of the last Occidental issue, in January, for which Dean Witter Reynolds was lead manager.

The terms of the Industrial Bank of Japan offering, for which Deutsche Bank is lead manager, include an indicated coupon of 5 per cent and a six year maturity.

The managers of the current placement are BHF-Bank, Richard Daus and Co., Bayerische Hypothek und Wechselbank and Deans Witter Reynolds.

The terms of the Industrial Bank of Japan offering, for which Deutsche Bank is lead manager, include an indicated coupon of 5 per cent and a six year maturity.

Also on offer in the D-Mark sector is a DM50m, seven year convertible for the Japanese year group Nippon Shuppan. Indicated coupon is 3 1/2 per cent, and lead manager is BHF-Bank.

Balancing payments between developed countries and LDC's

BY TERRY OGG

THE PROBLEM for world monetary authorities is no longer the size of developed countries' current account deficits but the way in which these deficits can be financed and stable debt structures implemented, according to Mr. H. Forsyth, chief economist with merchant bankers Morgan Grenfell and Company Limited.

Mr. Forsyth was commenting on speeches delivered by Dr. H. J. Witteveen (managing director of the International Monetary Fund), Mr. J. H. Frimpong-Ansah (chairman of the Standard Bank of Ghana) and Mr. Roger A. Azar (director of the Banque Arabe et Internationale d'Investissement), at yesterday's Financial Times Euromarkets Conference.

The three speakers dealt with the role of both private and public institutions in the financing of the lesser developed countries. As each speaker pointed out, the lesser developed countries are not simple economies to analyse and their performance is very closely linked to world demand for agricultural products and raw materials.

Since the 1973 Organisation for Petroleum Exporting Countries (OPEC) oil price increase, developed countries have been forced to accept that balanced current accounts are no longer possible. Mr. Forsyth said, interest has shifted to how the major problem here is building up a stable, lasting debt structure.

Mr. Frimpong-Ansah had touched on this point in his speech earlier in the day. "Until the LDCs develop regional trade between themselves, they will depend upon their trade with more developed countries to generate their growth. Export of primary products and semi-manufactures to the developed world, however, exposes the LDCs to many unstable economic conditions such as deflation, increased debt burdens and reduced economic activity. Where an LDC relies heavily on international trade and does not have a sufficient reserve cushion or the means of inducing short to medium term capital inflow, a small dose of world-wide recession could set its clock back several years."

He said that a great deal has been done in recent years to promote resource transfer to the LDCs, but there still exists some feeling of disappointment because LDC needs have not been fully met by existing arrangements.

The LDCs are looking for greater influence in the policy-making of institutions set up to channel funds to them, according to Mr. Frimpong-Ansah, and they are attempting to have the services of the international institutions more directly geared to their needs. The LDCs are especially concerned about their interior

Mr. Azar concentrated on the role that the Arab countries were playing in the provision of financial and technical assistance to the LDCs. He pointed out that although there had been a decrease in the actual value of funds provided in 1976 and 1977, the Arab world was still providing more aid, in terms of its gross national product, than most of the developed countries.

This aid programme began well before the price increase of 1973 and all that the price increase did was to multiply the dollar amount available for aid. He said that Arab aid peaked at U.S. \$8.4bn. in 1975 but in 1977 the amount is still expected to be U.S. \$7.0bn.

"I don't have the statistics but it could be argued that the indirect benefit to industrialised countries of Arab aid to the LDCs exceeds the industrialised countries' aid contributions to the LDCs."

Mr. Witteveen's comments are covered elsewhere, but essentially, he justified the IMF's dual policy of lending funds on standby arrangements only after the receiving Government had agreed to certain conditions.

Mr. Forsyth, in his remarks, agreed with the conditionality aspect of the IMF's loans, saying that the Fund had earned an enviable reputation for impartiality and accuracy in the field of credit assessment. But he added that while the amount of money the Fund actually gave should not be abandoned its lending position, as the provision of funds was an important discipline for the IMF credit assessors.

The problems of the LDCs are very much tied up with the current account imbalances of the developed countries. These, in turn, are closely linked to the distortions in the monetary system, a subject touched on by the Governor of Denmark's National Bank, Dr. Eric Hoffmeyer. Dr. Hoffmeyer said that the fracturing of the fixed exchange rate system was largely due to decisions by major political authorities not to abide by the rules of Bretton Woods.

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| | Yamaichi International (Europe) Limited | Wardley Limited |

The 8,500 Notes of US\$10,000 each constituting the above issue have been admitted to the Official List of The Stock Exchange of the United Kingdom. Interest is payable semi-annually in arrears on 15th May and 15th November in each year, the first such payment being due on 15th November, 1978.

Particulars of the Notes and the Issuer are available in the Extel Statistical Services Limited and copies may be obtained during normal business hours up to and including 23rd May, 1978 from:—

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May 9, 1978

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INTERNATIONAL FINANCIAL AND COMPANY NEWS

Boussac scheme for debt reduction

BY DAVID CURRY

THE FAILING French textile group Boussac has inaugurated a vital week of discussion about its future by publishing a "miracle formula" to transform its capital structure and commercial prospects.

Published as one of the group's rare press releases, the scheme is clearly designed to influence to-day's Supervisory Board meeting which is discussing the eternal subject of financial recovery and, more particularly, Thursday's shareholders' meeting which will be asked to bless a scheme to transform the group holding company (GTF) into a company of limited liability and thus mark a clear distinction between the personal interests of the Boussac family and the industrial assets of the group.

On the personal level M. Jean-Claude Boussac, the nephew of the 89-year-old M. Marcel Boussac, the company founder, is struggling to maintain his own

position as "managing director for life" of the group under whatever new regime emerges.

At the end of 1977—a year which saw losses rise to Frs.107m.—group capital was Frs.90m. while medium and long term debts stood at Frs.286m. and short-term debt at Frs.571m. Transforming this arithmetic is the major of the tasks faced by M. Boussac, and M. Jacques Petit, the recently appointed "company doctor". They envisage increasing capital to Frs.340m. medium and long term debt to Frs.300m. and reducing short-term debt to Frs.287m. The first prerequisite is for M. Marcel Boussac and family-controlled companies to abandon the Frs.171m. credits they have out to the group in blocked current accounts.

The second requirement is that agreement be finally reached with the Boussac horse-training

estate the Haras de Jardy "for a sum in excess of Frs.150m." While the state is in principle ready to take this land, its own valuation, taking into account its unsuitability for building and the environmental opposition to development is well under the Frs.100m. mark.

Finally, the group wants the state to contribute about Frs.70m. in further loans to the enterprise and for it and the banks to convert into longer-term debt the Frs.100m.-odd owed by way of deferred social security charges and taxes. These debts would be reimbursed by the sale of non-industrial assets of the group.

On the industrial front the loss of a further 1,500 jobs in the Vosges and the closure of five plants are foreseen to clear the way for a new effort at modernisation of equipment and production.

M. Jean-Claude Boussac has presented these options as the alternative to the most widely

forecast post-electoral solution—putting of the company into receivership. His task is difficult because he has to combat the scepticism of Government and banks in the light of the failure of previous definitive rescue plans.

He must also convince the Government that a new judicial structure for the group will be matched by a new spirit of professional management.

Finally, this is by no means the least of his tasks—he has to persuade his uncle to authorise the divorce between family and firm, to waive the debts owed to him personally by the group and to accept his own final retirement from the industry.

On other words, the miracle cure will have to undergo long and sceptical analysis before it becomes a practical basis for action, although it may have the effect in the short-term of buying yet more time for the group.

PARIS, May 8.

Elsevier to pull out of W. H. Smith venture

By Charles Batchelor

AMSTERDAM, May 8. ELSEVIER, the Dutch publishing group, and W. H. Smith are to end their five-year-old Dutch retailing venture, Stms, because of losses running into "many millions of guilders."

Stms operates seven stores in Holland selling books, records, and other leisure articles. The retailing formula used successfully by Smith in the U.K. has not caught on with the Dutch public despite frequent changes in marketing policy, the two companies said in a joint statement. They are now studying whether the shops in Zwolle, Tilburg, Utrecht, Eindhoven and possibly Enschede can be integrated into either company.

Smith has substantial interests in the Dutch market and is under way with other companies aimed at the possible sale of the shops.

Elsevier declined to give details of the losses but said turnover of the operation was below Frs.100m. (\$25m.). Stms has made losses since it was set up as a joint venture in 1973.

Our City staff writes: In London last night W. H. Smith said the joint Dutch venture had lost the company £13.5m. since its launch and £1m. in the last financial year. Sales have regularly fallen below target and have been insufficient to support high initial operating costs.

The depressed state of the Dutch economy was blamed for Smith's losses, but a remarkable recovery in the market for the multiple's seven outlets "wasn't as big as we expected," Smith will continue to run at least one of the shops on an independent basis.

BIS QUARTERLY

Rise in third world lending

BY MARY CAMPBELL

INTERNATIONAL bank lending to less developed countries (LDCs) picked up sharply in the final quarter of last year, according to the latest data published by the Bank of International Settlements (BIS) in Basle. Indeed, bank lending to LDCs in the fourth quarter outstripped new deposits received by the international banking system in the fourth quarter, changing these countries from net depositors, as they had been earlier in the year, into net borrowers.

The amount of new bank lending to the LDCs in the fourth quarter was \$5.7bn and new deposits received from these countries were \$4.7bn, making the LDCs net borrowers of \$1bn in the quarter. This \$1bn. net borrowing figure, however, was not sufficient to outweigh the net deposits they had made

earlier in the year—over 1977 as a whole the LDCs raised their deposits with international banks by \$12.5bn. and increased their borrowing from them by \$11.3bn. As the BIS points out, in sharp contrast to the previous years, non-oil developing countries were in 1977 not suppliers of new funds to the international banking system.

The BIS also notes that the figures for LDCs and those for oil exporting countries (OPEC) in 1977 hardly differ, not only as to their borrowings from the international banking system but more surprisingly as to their deposits with the international banking system. New deposits with international banks from OPEC countries amounted to \$13.4bn. last year while their new borrowing was \$11.3bn. The BIS also notes that OPEC countries particularly built up some European currencies.

their non-dollar deposits with the international banks in the last quarter of last year, while the increase in their borrowings from banks was dollar-denominated.

In general the Euromarket grew at a more rapid pace in the last quarter of last year than in the earlier quarters. The BIS attributes this to three factors: mainly, a re-acceleration of the underlying upward movement in banks' international lending; the weakness of the dollar on the foreign exchange markets which caused banks and their customers to build up dollar positions for investment in stronger currencies either for commercial, or the BIS says, "for outright speculative purposes," and the customary seasonal impact of end-year, largely inter-bank operations in some European countries.

DUTCH SHIPPING

Keeping a cool head at Nedlloyd

BY BILL COCHRANE, RECENTLY IN ROTTERDAM

BILLED AS one of the world's largest shipping and transportation groups, Nedlloyd (formerly NSU) found time recently to stress the breadth of its operations. These, briefly, take in liner and container shipping, a bulk carriers and tankers and drillships; ports and specialised transport; industrial and international transportation.

But it also bit on the shipping bullet—opening on the "present state of gloom for the maritime industry" and concluding on prospects: "... we consider that a substantial fall in net group profits has to be expected in 1978."

There are two ways of looking at that. First, sourly: reported net profits had already fallen from Frs.146.7m. (\$66.5m.) to Frs.91.4m. in the three years to end-1977; and the coincidence of numbers in 1977 between the operating and reported net levels (see table) looks like a nice message for a tired set of accounts.

In fairness, it should be noted that loss elimination was partly responsible for last year's jump

in associate company income; that the "premium" new investment is taken into the accounts between Frs.27m. and Frs.28m. and that tax credits are a corollary (a) of Nedlloyd's deferred tax provision, still Frs.297m. at the end of 1977 and (b) its loss-making areas, particularly in tankers and bulk shipping.

Finally, currency fluctuations (particularly the weakness of the dollar against the guilder) knocked between Frs.10m. and Frs.15m. off net profits last year.

It might engender a warm, cosy feeling to say at this stage that the 1978 net profit may turn out better than expected; and, indeed, that any sort of profit in shipping at the moment is a considerable achievement. But that sort of response is conditioned by the historical pattern in shipping where, traditionally, the good years amply made up for the bad ones. Nedlloyd was getting returns of 30 per cent. to 40 per cent. on bulk carriers (pre-tax on total capital

invested) before the slump into the red over 1976-77.

The question now, unfortunately, is how long the slump is to be extended by world shipping overcapacity. It is a sobering thought that South Korea alone could satisfy four years' world tanker demand with just one year's production; and,

basically defensive—to maintain its market share on major liner routes.

Whether it can change its basic financial characteristics with the overabundance of capital investment in shipping, remains to be seen. As one observer put it, the U.K.'s biggest land carrier, the National Freight Corporation, is valued at either \$60m. or \$100m. and the latter figure is the cost of just one LNG carrier in the shipping area.

Nedlloyd appears phlegmatic. What it comes down to, according to finance director Mr. A. van Putten, is a question of pluses and minuses. On the plus side, it reckons to have an exceptionally broad geographical spread of liner services; the associates promise more, non-shipping can expand further at relatively little capital cost and, back in shipping, it does have government subsidies in the form of the investment grant.

On the minus side, there are tankers, bulk carriers (which it plunged into very heavily in 1973-75) and one LNG carrier, which cost \$70m., is laid up and has an unfortunately rapid repayment schedule for its associated borrowing.

So what of the future? Nedlloyd chairman Mr. B. E. Ruyter was free to say to go for the "darkest before the dawn" is routine, looking at this year and next. But he seemed uncommonly relaxed when he chuckled, and concluded: "the pluses always gain in the end."

| | | |
|--------------------------|---------|---------|
| Operating result | 137.6 | 46.4 |
| Associates income | 9.3 | 33.5 |
| Investment premium | NIL | 24.4 |
| Corporate tax | (40.2) | 7.5 |
| Net profit | 102.5 | 91.4 |
| Ships | 1,764.6 | 2,367.0 |
| Ships under construction | 571.2 | 241.4 |
| Other fixed assets | 312.8 | 348.1 |
| Shareholders' funds | 1,668.9 | 1,736.1 |
| Net debt | 502.6 | 854.6 |

Orders dip at Fischer

SCHAFFHAUSEN, May 8.

INCOMING orders at Georg Fischer AG in the first quarter of this year were ten per cent. below the level attained in the same period of 1977, general manager Robert May told a press conference. This left order books little changed on the end-year level of SFrs.764m., which was 12 per cent. above level at the close of 1976.

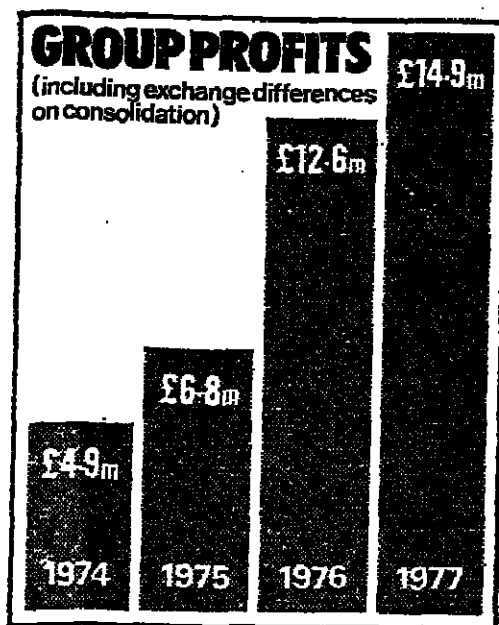
The current order book levels should however be sufficient to ensure full employment at the group's Swiss works for the rest of the year.

of the year, though a modest amount of short time working "cannot be excluded altogether." During the first quarter sales of steel castings to the German motor industry have held up well but there has been a further decline in orders for wheels, reflecting lower demand for goods vehicles in the Middle East.

The company's annual report shows that it improved its balance sheet structure by repaying Frs.74m. of borrowings last year.

SELECTED EURODOLLAR BOND PRICES MID-DAY INDICATIONS

| STRAIGHTS | Bid | Offer | STRAIGHTS | Bid | Offer |
|-----------------------------|---------|---------|----------------------------|--------|---------|
| Alex. Australia 5pc 1988 | 94 1/2 | 97 1/2 | Nordic Inv. Bk. 10pc 1984 | 94 1/2 | 97 1/2 |
| AMEV 5pc 1987 | 97 1/2 | 97 1/2 | Norfolk Hydro 10pc 1982 | 97 1/2 | 98 1/2 |
| Australia 5pc 1988 | 94 1/2 | 97 1/2 | Norway 10pc 1983 | 97 1/2 | 98 1/2 |
| Australian M. & S. 5pc 1982 | 97 1/2 | 97 1/2 | Ontario 5pc 1987 | 92 1/2 | 96 1/2 |
| Barclays Bank 5pc 1987 | 96 1/2 | 97 1/2 | Parsons 5pc 1988 | 94 1/2 | 97 1/2 |
| Bentley 5pc 1982 | 97 1/2 | 97 1/2 | S. of Scot. Elec. 5pc 1981 | 99 1/2 | 100 1/2 |
| Bowater 5pc 1987 | 97 1/2 | 97 1/2 | Sweden (K'dom) 10pc 1983 | 97 1/2 | 97 1/2 |
| Can. Nat. Ry. 5pc 1988 | 97 1/2 | 97 1/2 | Swedish 5pc 1988 | 97 1/2 | 97 1/2 |
| Credit National 5pc 1988 | 97 1/2 | 97 1/2 | Telmex 5pc 1984 | 99 1/2 | 100 1/2 |
| Denmark 5pc 1988 | 100 1/2 | 100 1/2 | Tokai 5pc 1987 May | 94 1/2 | 97 1/2 |
| ECB 5pc 1982 | 96 1/2 | 96 1/2 | Volvo 5pc 1987 | 95 1/2 | 95 1/2 |
| ECB 5pc 1987 | 96 1/2 | 96 1/2 | | | |
| ETB 5pc 1982 | 96 1/2 | 96 1/2 | STERLING BONDS | | |
| EMI 5pc 1988 | 96 1/2 | 96 1/2 | Allied Breweries 10pc '80 | 98 1/2 | 98 1/2 |
| Esso 5pc 1988 | 96 1/2 | 96 1/2 | Chubb 10pc 1983 | 98 1/2 | 98 1/2 |
| Esso 5pc 1988 Nov. | 101 1/2 | 101 1/2 | Comau 5pc 1988 | 98 1/2 | 98 1/2 |
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Advance



...and be recognised

Minets earn record profits and a second Queen's Award.

In a year when sterling's appreciation against the US dollar and other major currencies adversely affected the overseas earnings of many companies, Minets earned over three quarters of their 1977 brokerage income of £26.6m overseas.

In fact, over the three years 1974, '75 and '76, Minets succeeded in doubling overseas earnings, a feat which brought us a Queen's Award this year for Export Achievement.

It follows our 1973 Queen's Award, the first ever received by an insurance broker and now makes us the first in our field to receive this Award twice.

Group pre-tax profits at £15.2m represented a 23% increase on 1976, itself a record year with an 84% improvement on 1975. Earnings per share were 27% up at a record 16.03p.

The largest single contribution to Minet's profits came, as always, from North America where the marked increase in our business over the past three years continues unabated.

Elsewhere, the Group continues to expand, not only in the U.K. but also in Europe and the Third World, and to develop the sophisticated techniques and services increasingly required by clients.

Future prospects.

Reviewing the immediate future, Minet's Chairman, Mr. John Wallrock said: "For the past three years profits have been materially affected by fluctuating exchange rates and high interest rates. Assuming a return to more stable conditions I am confident that your Group can achieve its more traditional growth rate this year."



The 1977 Report and Accounts, containing the Chairman's Review, are available from: The Secretary, Minet Holdings Ltd., Minet House, 66 Prescott Street, London E1 3BU.

Zaire company funded by Tokyo

TOKYO, May 8. SEVEN JAPANESE companies have agreed to supply special financing totalling ¥3.5bn (\$15.4m) to Compagnie de Développement Miniere du Zaïre (Codemiza), in which they are shareholders, Japanese copper smelters said.

The money will be used to cover Codemiza's deficit in fiscal 1977, which ended last March, stemming from a world copper market slump, they said.

Codemiza operates a venture company, Société de Développement Industriel et Minier du Zaïre (Sodemiza), jointly with the Zaire Government.

Sodemiza produces 27,000 tonnes of copper ore annually in terms of copper content for supply to Japan, the smelters said.

The seven are Nippon Mining, Mitsui Mining and Smelting, Mitsubishi Metal Corporation, Sumitomo Metal Mining, Dowry Mining, Furukawa Mining and Nishio-Iwai Company.

Advance at Boustead

By Wong Sulong

KUALA LUMPUR, May 8. BOUSTEAD Holdings boosted its pre-tax profits by 75 per cent last year to 15m. ringgits (\$6.3m.) and is declaring a scrip issue for the second successive year.

Last year, Boustead declared a one-for-one scrip issue, doubling its paid-up capital to 21m. ringgits, and it is proposing to make a one-for-ten issue in June, following the improved results. The new issue will not, however, receive the final 12.5 per cent dividend.

A substantial part of the group's profits come from its plantation subsidiary, Malakoff Berhad, which reported a 1977 pre-tax profit of 8.2m. ringgits last year (\$4.06m. ringgits).

The parent investment company lifted its pre-tax profits from 3.1m. ringgits to 4.5m. ringgits.

Good year for Esso Malaysia

By Our Own Correspondent

KUALA LUMPUR, May 8. ESSO MALAYSIA Berhad, an associate of Esso Corporation, increased its pre-tax profits to 6m. ringgits (\$US2.5m.) last year from 3.4m. ringgits in 1976.

The company pointed out that a substantial part of its profits, amounting to 5.4m. ringgits before tax, came from gains in foreign currency arising from the fall in the U.S. dollar, which made for cheaper oil imports.

The company also made a gain of 2.6m. ringgits pre-tax through a change in the basis of providing for its annuity benefit scheme.

A final dividend of 20 per cent is declared, bringing the year's total to 25 per cent, against 18 per cent previously.

Barrel sales rose by only 6 per cent, to 13.7m., compared with an increase of 14 per cent in 1976. Its refinery at Port Dickson processed almost 12m. barrels because of a plant turnaround, and this was marginally lower than in 1976.

However, an extended turnaround at its ammonia plant caused a 16 per cent fall in ammonia production to 43,500 tons.

The company's profits were affected as in the past few years, by a fixed price contract to supply fuel to the National Electricity Board at \$US12.2 per barrel. However, this contract ends in August, and the end of this heavy burden should be reflected in the company's results for this year.

Drop in demand hits FELs

By H. F. Lee

SINGAPORE, May 8. THE RECESSION in the shipbuilding industry has hit the leading Singapore ship and rig builder, Far East-Levingson Shipbuilding Singapore (FELS).

For the year ended December, group pre-tax profit fell sharply to \$S8.6m. (\$US3.1m.). In 1976, group pre-tax profit reached a record \$S72.5m., despite the poor demand for ships and rigs.

At the post-tax level, group profit was \$S4.1m., against \$S5.4m. previously.

Mr. P. H. Meadows, the chairman, attributed the downturn to the acute fall in demand for ships and rigs, and under-utilisation of shipyard capacity.

This also necessitated a cut-back in operations, and in the workforce.

As a result of the lower profit, FELS is to cut its proposed dividend payment by 5 percentage points to 20 per cent.

Mr. Meadows also painted a bleak outlook for the group's operations.

"For the future, the opportunities for ship orders from Europe and for that matter, elsewhere are poor, mainly as a result of protectionist policies adopted in Europe, aggravated by the fall-off in demand, overcapacity, and fierce competition."

"Moreover, relative newcomers to the industry such as Korea and Third World countries are confounding the market with prices that are still lower than the lowest hitherto," he said.

For the current year, FELS has budgeted for a production revenue "lower than in past years."

Mr. Meadows gave no profit forecast for 1978 but he appeared to indicate another sharp reduction in profitability.

LURIE RESIGNS FROM PRIMROSE

End of a colourful era

BY RICHARD STUART IN JOHANNESBURG

DAVID LURIE, who recently resigned as chairman of Abercom, has now left the Board of Primrose Industrial Holdings. This action is a widely expected sequel to the market operation launched by the Natal-based sugar group, Tongaat, in which it secured 33 per cent of Primrose shares and gained proxies over sufficiently more shares to give it control. When Tongaat disclosed its hand, it was announced that Mr. Lurie would be relinquishing his chairmanship of Primrose but would be staying on the Board.

The resignation from the Primrose Board closes a colourful chapter in South African business history. Mr. Lurie and his partner, Mr. Murray McLean, originally backed by Jim Slater, developed Abercom from a shell into a thriving conglomerate which was accepted by the investment community as one of the leading industrial counters. In the course of its conglomerate growth, Abercom acquired the principal Transvaal-based brick group which it reorganised under the Primrose banner. Lurie and McLean soon realised that the cyclical nature of Primrose's earnings could upset the smooth progress of Abercom's own earnings record and, in 1973, split Primrose from Abercom, leaving shareholders with a share in each separate entity.

In early 1976, McLean severed his connections from the twin companies, leaving Lurie at the helm of both. Lurie, a restless innovator, kept expanding late into the business recession and the profitability of both companies is now being affected.

In the heat of battle for control of Primrose, the Board, at the request of the Johannesburg Stock Exchange, suspended the company's quotation on the strength of negotiations to acquire a small anthracite producer, Aloe Minerals. Despite the change of control, agreement in principle for the acquisition of Aloe has now been reached.

The new company will be registered in the name of a unified exchange—this has yet to be decided—by the Hong Kong federation of stock exchanges, and the Chairman of the Federation, currently Mr. Peter Chan, Chairman of the Kowloon exchange, will head the company.

Despite some groundwork on unified listing and trading rules by the Hong Kong stock exchange, there has been little progress so far towards unification, and there are doubts on whether the original merger target date of January, 1980 can be met.

The government has threatened legislation unless progress is made on a voluntary merger, however, and the latest move has been to see in this light.

Meanwhile, the four exchanges are having talks on sharing trading floors, as a first step towards full merger.

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Barclays National net hit by tax rise

By Richard Stuart

JOHANNESBURG, May 8.

OPERATING profits at Barclays National Bank, which is 64 per cent owned by Barclays International, increased by 17 per cent from R23.6m. to R28.5m. (\$30.5m.) in the first half of the current financial year. But a jump in the tax rate from 35 per cent to 40 per cent meant a lower rise in after tax profits, which are 9 per cent higher at R16m. compared with R14.7m. the previous year.

The bank said that profits went up despite the continuing high level of business failures. Should the difficult economic conditions persist and further failures occur, however, earnings growth in the second half could be affected.

In the last full financial year, to September, 1977 a provision of R11m. was made for doubtful debts over and above normal provisions. Of this amount, R5m. was charged against first half profits. As the bank has not disclosed the extent of the bad debt provision for the half year just completed, the direct comparison of profit figures is obscured.

The lower tax rate last year resulted from investment allowances on increased leasing business in the Western Bank subsidiary. This reduced rate was expected to apply against this year. But while the tax rate is perplexing, the increased interim dividend is at the upper range of market expectations, and the share continues to trade close to its two year high, and yields a prospective 7 per cent.

Ovenstone gain

OVERSTONE INVESTMENTS, the South African fishing group reports net attributable profits up from R2.7m. to R2.9m. for 1977-78, writes Richard Stuart from Johannesburg.

The dividend is 6 cents against 8 cents previously.

Hong Kong SE merger move

BY ANTHONY ROWLEY

HONG KONG, May 8.

THE FORM of the proposed merger of Hong Kong's four stock exchanges—the Hong Kong exchange, the Kowloon exchange, the Far East exchange, and the Kwan Yee exchange—has been agreed to by the Hong Kong federation of stock exchanges, and the Chairman of the Federation, currently Mr. Peter Chan, Chairman of the Kowloon exchange, will head the company.

A sub-committee is to be set up, meanwhile, to examine the most pressing problem for the proposed new exchange: that of finding a suitable site or premises.

The new company will be registered in the name of a unified exchange—this has yet to be decided—by the Hong Kong federation of stock exchanges, and the Chairman of the Federation, currently Mr. Peter Chan, Chairman of the Kowloon exchange, will head the company.

Despite some groundwork on unified listing and trading rules by the Hong Kong stock exchange, there has been little progress so far towards unification, and there are doubts on whether the original merger target date of January, 1980 can be met.

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Commercial Union

Assurance Company Limited

The Board announces estimated and unaudited profits for the 3 months to 31st March 1978 of £18.9m. (1977 £11.5m.) after providing for taxation. These results cannot be taken as a guide for the year as a whole.

| | 3 months to 31st March 1978 Estimate | 3 months to 31st March 1977 Estimate Restated Note (a) | Year 1977 Actual |
|--|---|---|---------------------|
| | £m. | £m. | £m. |
| PREMIUM INCOME | 334.0 | 357.1 | 1,072.5 |
| Investment income | 33.5 | 32.0 | 127.7 |
| Life profits | 3.5 | 3.0 | 14.2 |
| Underwriting loss | (2.3) | (11.2) | (30.9) |
| Loan interest | (5.1) | (5.8) | (21.2) |
| PROFIT BEFORE TAX | 29.6 | 18.0 | 99.8 |
| Taxation and minorities | (10.7) | (6.5) | (32.2) |
| PROFIT ATTRIBUTABLE TO SHAREHOLDERS | 18.9 | 11.5 | 67.6 |
| EARNINGS PER SHARE | 4.60p | 3.67p | 19.40p |
| SHAREHOLDERS' FUNDS | £598m. | £423m. | £564m. |

Notes

- The results for the 3 months to 31st March 1977 have been restated to allow for the change, during the latter part of last year, in the Company's accounting policy for deferred taxation.
- The results of the Company's overseas operations have, as usual, been converted at rates of exchange prevailing at the close of the periods reported above.

World-wide premium income in sterling terms shows a reduction of 6%. However, after allowing for changes in rates of exchange and the effect of the sale of the Austrian and German companies in 1977, there is a growth in premium income of approximately 3%.

In the United Kingdom there has been an improvement in experience in most classes of business except fire. The cost of the severe winter storms on the fire account amounting to £3m. has been charged to the extreme weather provision.

The underlying improvement in the United States has continued with motor, liability and workers' compensation classes all contributing to the improvement. There were heavy winter storm losses in the first quarter which particularly affected the fire class. The statutory operating ratio was 99.0% compared with 107.4% for the same period last year.

In Australia underwriting was markedly less profitable due to severe competition, particularly for fire business. Canada has continued to make a small profit under the limitations imposed by the Anti-Inflation Board.

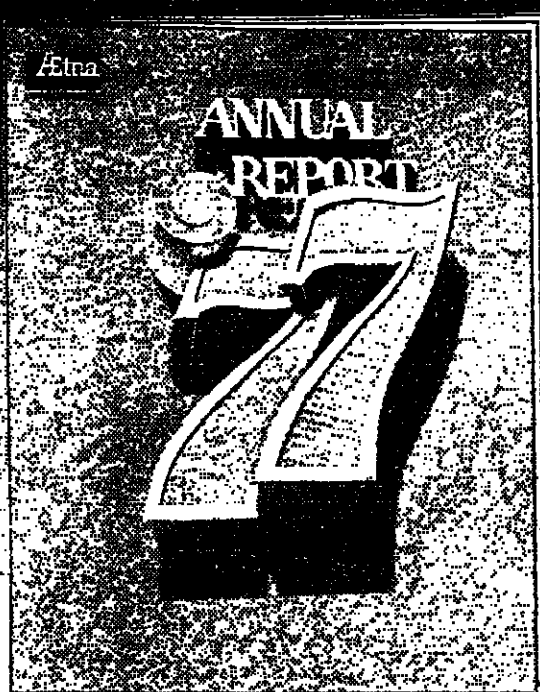
The underwriting result in the Netherlands has remained unprofitable, but most of the effect of rate increases already approved for 1978 has still to come.

In marine and aviation business there is no lessening of competition in the London market, but the 1976 underwriting year, when closed at the end of 1978, is expected to produce a profit.

Insure with
Commercial Union
Assurance

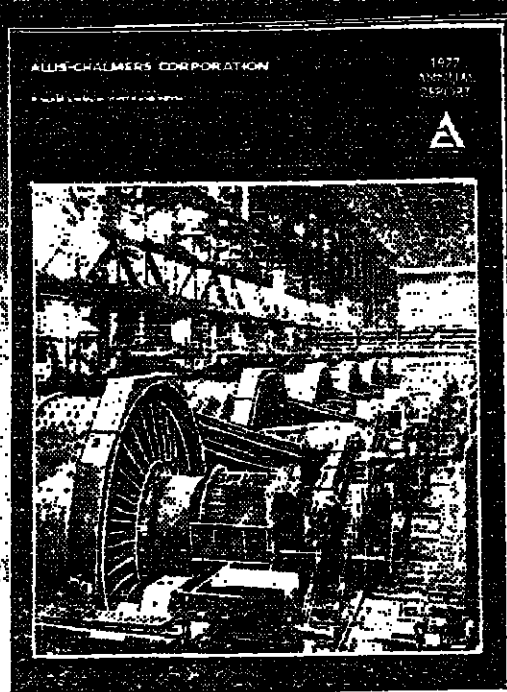


هكذا كنت الأمل



Aetna Life & Casualty

Aetna Life & Casualty—largest investor-owned insurance organization in U.S. with interests also in business financing, real estate development and investment management. 1977 earnings reached new high of \$418 million or \$7.76 per share on revenues of \$8.1 billion. Assets and shareholders' equity grew to \$20.8 billion and \$38.00 per common share, respectively. Annual dividend per common share increased to \$2.20 with May 15, 1978 payment; fourth increase in last five years.



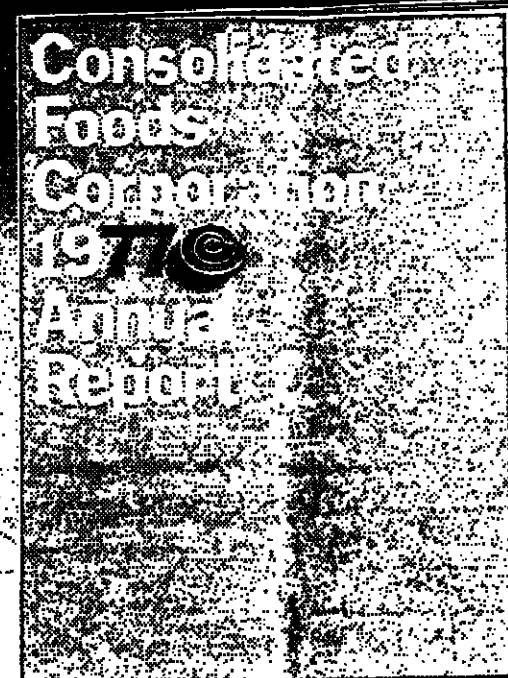
Allis-Chalmers Corporation

A special machinery company serving diversified equipment needs worldwide for processing of solids, liquids and gases; agricultural production; and material handling and lawn and garden applications. Jointly-owned affiliates provide electrical equipment and construction machinery. Per share 1977 earnings were a record \$5.52, up 22% from 1976. Sales in 1977 were \$1.538 billion. Current annual dividend rate: \$1.30. Return on shareholders' equity: 12.9%.



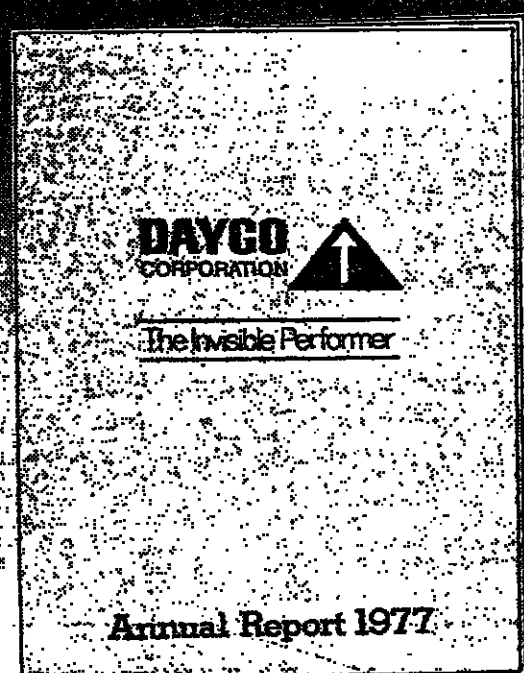
Ametek Inc.

AMETEK (NYSE Symbol—AME) a diversified manufacturer of industrial materials and equipment—and a leader in pressure instruments, appliance motors, winery and other process equipment—AMETEK reported sales of nearly \$300 million in 1977. Earnings—a record for the sixth consecutive year—were up 21% to \$172 million or \$3.32 per share. In 1977 AMETEK continued its 28 year record of dividend increases, now paying \$1.60 per share, a 5% yield on its 5.2 million shares which were recently trading in the \$30-\$32 range.



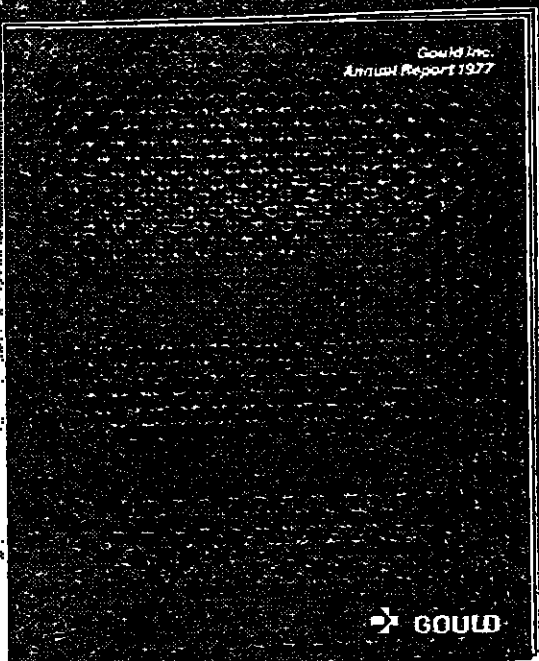
Consolidated Foods Corporation

Record sales of \$2.89 billion and record earnings of \$88.1 million highlighted Consolidated Foods Corporation's fiscal 1977. The corporation will build upon its already solid base and continue to improve key areas. Emphasis will be directed towards new product development, geographic expansion, penetration of new markets and aggressive marketing programs.



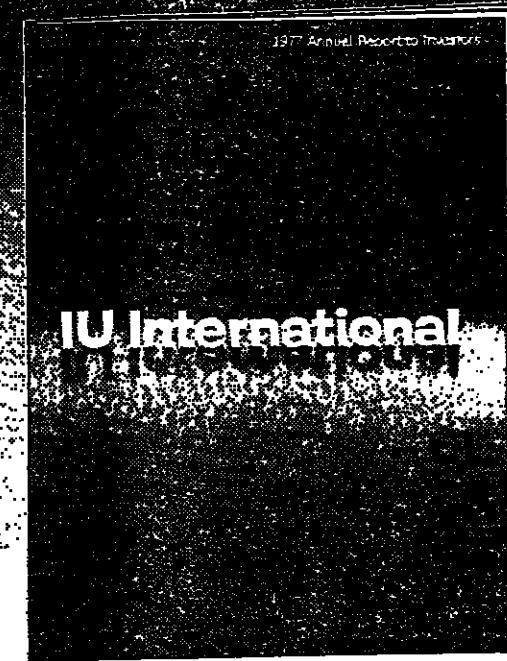
Dayco Corporation

Fiscal 1977 was the most successful year in Dayco Corporation's (DAY-NYSE) 72-year history. Total sales were \$573.4 million. Consolidated net income was \$13.6 million. Since 1971, Dayco's earnings increased an average of 20% on an average sales increase of 11%. Dayco, 360th among the Fortune 500, manufactures and distributes thousands of components and replacement parts vital to most industries.



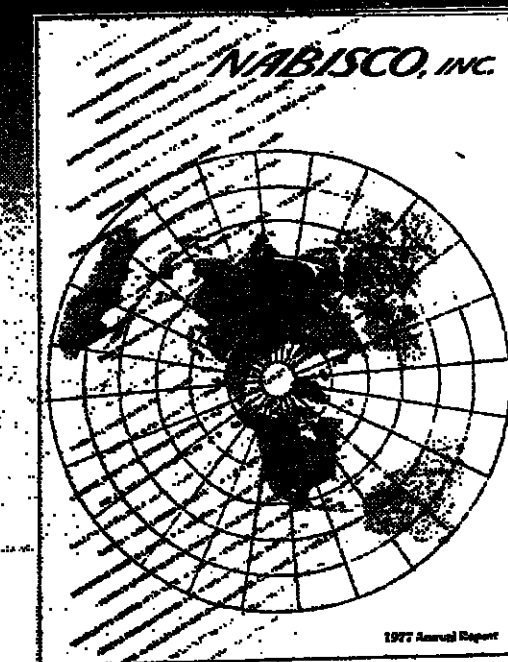
Gould Inc.

In 1977 Gould achieved a new record of \$1.6 billion in sales and over \$93 million in net earnings. Earnings per share rose 12% to \$3.72. Gould Inc., headquartered in Rolling Meadows, Illinois, is an international developer and manufacturer of electrical and industrial products.



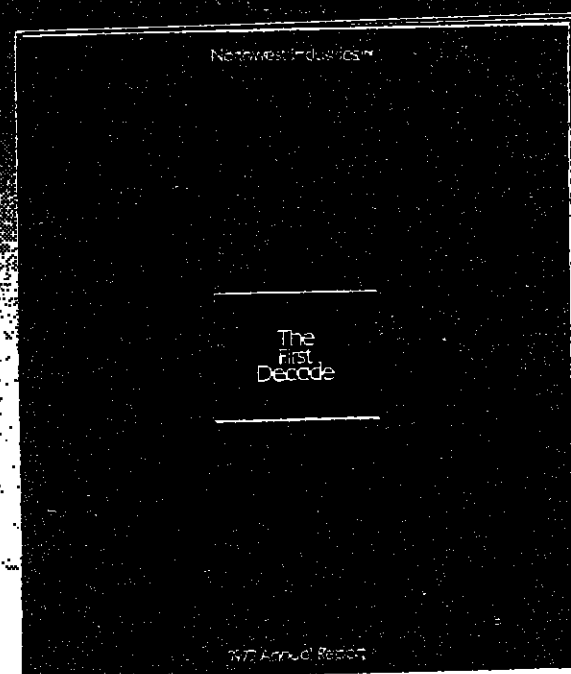
IU International

IU International is a diversified company with major interests in land transportation, ocean shipping, utilities, industrial products and services, distribution services, and agribusiness. Earnings in 1977 were \$59.2 million, or \$1.75 per common share on revenues of \$2.3 billion. IU's dividend payout—90 cents per common share in 1977—increased for the 33rd consecutive year. (NYSE Symbol: IU)



Nabisco, Inc.

Nabisco, Inc., a worldwide consumer products company, is best known as a manufacturer of quality cookies, crackers and snack products. Nonfood products include popular toiletry and pharmaceutical brands, as well as household accessory items.



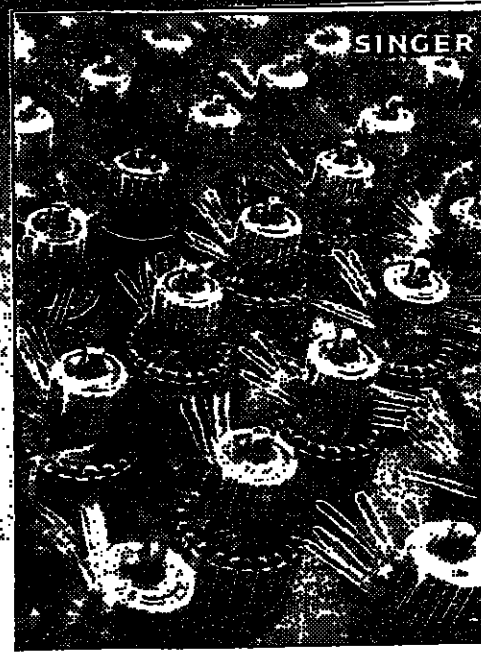
Northwest Industries, Inc.

Northwest Industries—diversified—serving basic industrial, chemical and consumer markets in the United States—earning \$129.4 million, or \$8.40 per share, on sales of \$1.9 billion in 1977—compounding earnings at 20% a year since 1968 and earnings per share at 25.8%—returning 20.3% on average common equity and 13.8% on average total capital—and paying a dividend of \$2.85.



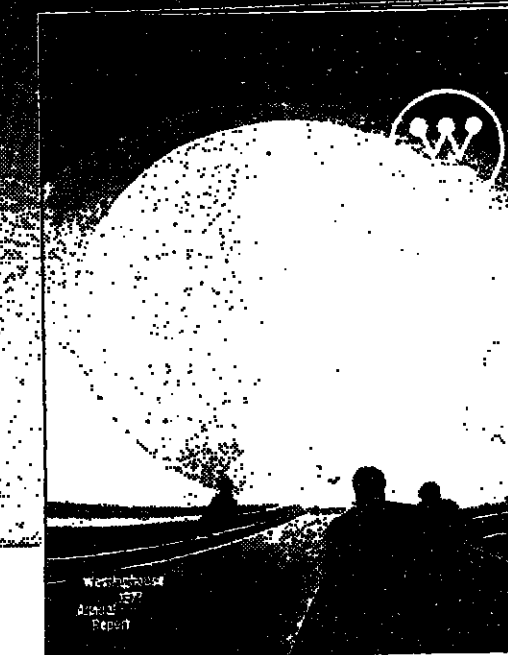
Pullman Inc.

Pullman Incorporated, a diversified, multinational corporation with annual revenues exceeding \$2 billion, primarily engaged in the engineering and construction of industrial and process plants and the manufacture and leasing of transportation equipment.



Singer

Singer sales reached \$2.3 billion in 1977 and income from continuing operations increased 27% over the prior year to \$74.5 million. Singer stands at the forefront of technology in products ranging from sewing machines to simulators. Primary direction for development in the next 5 years will be through electronic applications to existing products in the company's three basic product areas: Sewing Products, Products Manufactured for the Consumer and Products and Services for Government.



Westinghouse Electric Corporation

1977 was the third straight year of record earnings—\$2.86 per share (including \$.24 provision for several uranium suit settlements)—up from \$2.54 in 1976. Wide range of equipment to generate, transmit and utilize electricity efficiently. Worldwide servicing. Technology and market leader in nuclear power. Many products to help large energy users conserve fuel, reduce electric bills.

The facts and figures behind 12 major US corporations

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| <input type="checkbox"/> Allis-Chalmers Corporation | <input type="checkbox"/> Consolidated Foods Corporation | <input type="checkbox"/> Gould Inc. | <input type="checkbox"/> Northwest Industries, Inc. | <input type="checkbox"/> Westinghouse Electric Corporation |
| | <input type="checkbox"/> IU International | <input type="checkbox"/> Pullman Inc. | | |

Name _____ Position _____

Company _____ Address _____

STOCK EXCHANGE REPORT

Markets drift in absence of follow-through support
Long gilts lose $\frac{3}{8}$ and 30-share index eases 1.4 to 480.1

Account Dealing Dates

First Declara- Last Account
Dealing Date Dealing Date
Apr. 17 Apr. 22 Apr. 22
May 11 May 12 May 12
May 15 May 26 Jun. 7

An attempt to extend last week's rise in equities failed, however, as the market drifted lower in the absence of follow-through support. A similar situation in British Funds ended with the longer maturities down 2 at the official close and a little more was lost in later, unofficial, business.

Both equities and funds were gradually affected by doubts whether or not interest rates had yet found a new level, nervousness over last night's vote in the Commons on the Finance Bill, the Confederation of British Industry pronouncements on difficult export market prospects and a series of bad headlines.

An anxious eye was also being kept on the trend in sterling, as it was not surprising that recent weeks of leading equities declined to defer any new commitment until such time as some of the problems are resolved. Interest in secondary and situation funds failed to abate, the latter being highlighted by the announcement that Northern Foods' agreed offer for Park Farms and the latter's first-quarter results are due tomorrow.

The overall fluctuation in the 30-share index was 1.4 points, down 1.4 to 480.1. The broader-based FT-Actuaries Industrial Group index eased 0.1 per cent to 210.0, but strength in the oil sector left the allshare index up 0.7 per cent, at 217.6. Rises in FT-quoted industrials, at 130.8, continued their supremacy over the 100.

Gilts uncertain
A reluctance to invest while the current level of interest rates remained in doubt and nervousness, continued about money supply—the latest clearing banks' credit facilities will be announced today—was clearly noticeable in the allshare market. Once a small rally was completed, quotations drifted lower and the longer-dated half of Friday's gains of 1.5 while the shorter were 1.0 or so.

The trend continued after the official close of business. Following sterling's late reaction, the 30-share index fell 1.4 to 480.1, while the FT-Actuaries Industrial Group index eased 0.1 per cent to 210.0, but strength in the oil sector left the allshare index up 0.7 per cent, at 217.6. Rises in FT-quoted industrials, at 130.8, continued their supremacy over the 100.

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Traded options were fairly

active with 762 contracts made, Courtlands and Commercial Union featured with 123 and 124 contracts respectively, while 114 were done in ICI. Grand Met 120 and BP 80, both new series in which deals started yesterday, were traded 44 and 18 times respectively. A new 120 series in Land Securities is being introduced today.

The investment currency market had another fairly inactive day in which the premium continued to hover around 110 per cent. After touching 110 per cent, following sterling's business, it came back to settle 1 up on balance at 110 per cent. Yesterday's conversion factor was 0.6805 (0.6763).

Com. Union firmer
After moving between extremes of 150p and 152p, Commercial Union closed 2 dearer on balance at 150p following the first-quarter figures which were in line with expectations. Eagle Star, however, ended 2 cheaper at 148p and Royal 2 penny softer at 156p; the latter's first-quarter results are due tomorrow.

Closing gains of up to 5 in the major clearing banks reflected the prospect of improved profits, but the market was held back by the announcement that Northern Foods' agreed offer for Park Farms and the latter's first-quarter results are due tomorrow.

Activity in the Brewery sector lessened considerably and leading issues were rarely altered. Securities stocks made gains, including J. Brown, 7 up at 120p, and Hoddingtons, 6 firmer at 164p.

Marshall advanced 17 to 308p, after 22p, after the announcement of capital reorganization plans and a forecast of a doubled dividend; the 4.9 per cent. Cumulative Preference shares rose 15 to 72p. Newstart improved 7 to 120p, in sympathy. Richard Costain firmed 6 to 210p ahead of today's preliminary results.

Alfred Construction added 7 to 130p in further recovery, as results. Taylor, Woodrow closed 8 dearer at 262p and Tilly Construction 3 up to 268p. C. L. Pearce responded to increased annual profits and the corporation's confident statement of the announcement of the £10m, 12p and 12p new 1988 issue apart from the recently issued Greenwhich 112 per cent, 20p stock which, in a 10p paid form gave 1 at 282p. Port of London Authority stocks recovered from Friday's sharp rise to 61 per cent, 20p, 2 points to 231.

Reed Int. down
Publicity given to a broker's adverse circular unsettled Reed International which lost 7 to 113p. The Scottish and Universal Investments gave up 4 to 119p, after 18p, awaiting further developments in the Lornha bid situation. Other miscellaneous industrial leaders generally drifted lower in the trading.

After 18p, awaiting further developments in the Lornha bid situation. Other miscellaneous industrial leaders generally drifted lower in the trading. After 18p, awaiting further developments in the Lornha bid situation. Other miscellaneous industrial leaders generally drifted lower in the trading.

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Secondary issues held up

better with Anchor Chemical putting on 3 to 79p and Brent 2 to 224p, after 225p. HTV N.V. benefited from Press comment and put on 3 to 115p. In sympathy LWT A firmed 7 to 133p and Ulster Television A 4 to 60p.

Vernon Fashion good
The volume of business in the leading Stores contracted quite considerably after last week's activity. Quotations subsequently drifted gently lower with Marks and Spencer closing 2 easier at 145p and Burton A penny lower at 117p, the latter despite favourable comment ahead of Thursday's interim results. Elsewhere,

a fall of 31 to 32p in Weeks Associated. Highlight of the Food sector was a jump of 108 to 663p in Park Farms on news of the agreed cash or cash and share exchange offer worth 875p and 683p respectively from Northern Foods, which closed 3 cheaper at 92p. Elsewhere,

Robertson Foods, an old speculative favourite, moved up 7 to 145p, while Hilliards closed 1 higher at 201p following the announcement of the acquisition of 17 discount food stores from Fitch Lovell. J. Bibby improved to 222p in response to Press mention before drifting back to close unaltered on balance at 224p. Among Hotels and Caterers, Brent Walker was outstanding with a fresh rise of 7

to 66p. Ladbroke improved 4 to 205p, while Trust Houses Forte closed a penny dearer at 211p, after 212p.

Vernon Fashion continued to draw benefit from recent excellent trading news and finished a further 7 higher at 118p. Foster Bros. gained 4 to 106p as did Status Discount to 189p. Among Shoes, improvements of 2 and 4 respectively were seen in Booth (International), 6p, and Ward, 7p.

Inclined harder at the start, Electrical leaders drifted back and lower on balance. Elsewhere, demand in a restricted market lifted Louis Newmark 7 to 170p, while Press mention left Decca 8 to the good at 48p and the "A" a similar amount dearer at 48p. Fresh interest was shown in Rael (which touched 25p before settling at 24p for a rise of 4 on balance. Similar improvements were recorded in Electronic Rentals, 12p, and Muirhead, 18p. Engineering leaders finished the day with modest losses, but selective interest was being shown in secondary issues. Among the more noteworthy movements, Besser Engineering, 8 to 170p, closed at 170p, while a rise of 20 to 130p, while Johnson at 162p. Demand in front of annual results, due on Thursday, added a penny to J. E. Holdings at 67p, and, despite reduced profits, Tysons Contracting firmed a like amount to 231p. In Chemicals, ICI eased 4 to 224p, after 225p, while Pisons, initially firmer at 359p, closed only a penny higher at

360p. Secondary issues held up better with Anchor Chemical putting on 3 to 79p and Brent 2 to 224p, after 225p. HTV N.V. benefited from Press comment and put on 3 to 115p. In sympathy LWT A firmed 7 to 133p and Ulster Television A 4 to 60p.

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INSURANCE, PROPERTY, BONDS

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|---|--|--|---|--|--|
| Abbey Life Assurance Co. Ltd. 13, Paul Churchard Rd., E.C.4 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | General Portfolio Life Ass. Co. Ltd. 60 Rathbone Ct., Waltham Cross, W.31 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | NPI Pensions Management Ltd. 41, Grosvenor St., W.1 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | Abbey Unit Trst. Mgrs. Ltd. (a) 72, Abchurch Lane, E.C.4 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | Garthmore Fund Managers (a) (a) 1, N. Mary St., E.C.4 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | Perpetual Unit Trust Mgmt. (a) 41, Abchurch Lane, E.C.4 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% |
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AUTHORISED UNIT TRUSTS

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| Abbey Unit Trst. Mgrs. Ltd. (a) 72, Abchurch Lane, E.C.4 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | Garthmore Fund Managers (a) (a) 1, N. Mary St., E.C.4 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | Perpetual Unit Trust Mgmt. (a) 41, Abchurch Lane, E.C.4 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | Abbey Unit Trst. Mgrs. Ltd. (a) 72, Abchurch Lane, E.C.4 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | Garthmore Fund Managers (a) (a) 1, N. Mary St., E.C.4 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | Perpetual Unit Trust Mgmt. (a) 41, Abchurch Lane, E.C.4 Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% |
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OFFSHORE AND OVERSEAS FUNDS

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| Arbutnot Securities (C.I.) Limited P.O. Box 284, St. Helier, Jersey Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | King & Shaxson Mgrs. 1, Charles Cross, St. Helier, Jersey Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | Bank of America International S.A. 25 Boulevard Royal, Luxembourg Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | Arbutnot Securities (C.I.) Limited P.O. Box 284, St. Helier, Jersey Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | King & Shaxson Mgrs. 1, Charles Cross, St. Helier, Jersey Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% | Bank of America International S.A. 25 Boulevard Royal, Luxembourg Pension Fund: 12.5% Property Fund: 12.5% Equity Fund: 12.5% World Money Fund: 12.5% World Bond Fund: 12.5% World Equity Fund: 12.5% World Property Fund: 12.5% |
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BASE LENDING RATES

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|---------------------------|--------|-------------------------|--------|
| A.B.N. Bank | 7 1/2% | Hambros Bank | 7 1/2% |
| Allied Irish Bank Ltd. | 7 1/2% | Hill Samuel | 7 1/2% |
| American Express Bk. | 7 1/2% | C. Hoare & Co. | 7 1/2% |
| A.P. Bank Ltd. | 7 1/2% | Julian S. Hodge | 7 1/2% |
| Bank of America | 7 1/2% | Hongkong & Shanghai | 7 1/2% |
| Bank of Credit & Commerce | 7 1/2% | Industrial Bk. of Scot. | 7 1/2% |
| Bank of Cyprus | 7 1/2% | Koysler Ullmann | 7 1/2% |
| Bank of N.W.S. | 7 1/2% | Knowles & Co. Ltd. | 7 1/2% |
| Banque Belge Ltd. | 7 1/2% | Lloyds Bank | 7 1/2% |
| Banque du Rhone | 7 1/2% | London & Lancashire | 7 1/2% |
| Barclays Bank | 7 1/2% | Midland Bank | 7 1/2% |
| Barnett Holdings Ltd. | 7 1/2% | Morgan Grenfell | 7 1/2% |
| Bremer Holdings Ltd. | 7 1/2% | National Westminster | 7 1/2% |
| Brit. Bank of Mid. East | 7 1/2% | Norwich General Trust | 7 1/2% |
| Brown Shipley | 7 1/2% | P.S. Refson & Co. | 7 1/2% |
| Crown Permut Trust | 7 1/2% | Rossminster Accepts | 7 1/2% |
| Capitol & C. Fin. Ltd. | 7 1/2% | Royal Bk. Canada Trust | 7 1/2% |
| Cayzer Ltd. | 7 1/2% | Schlesinger Limited | 7 1/2% |
| Cedar Holdings | 7 1/2% | E. S. Schwab | 7 1/2% |
| Charterhouse Japhet | 7 1/2% | Security Trust Co. Ltd. | 7 1/2% |
| Choulatours | 7 1/2% | Shenley Trust | 7 1/2% |
| C. E. Coates | 7 1/2% | Standard Chartered | 7 1/2% |
| Consolidated Credits | 7 1/2% | Trade Dev. Bank | 7 1/2% |
| Co-operative Bank | 7 1/2% | Trustee Savings Bank | 7 1/2% |
| Corinthian Securities | 7 1/2% | Twentieth Century Bk. | 7 1/2% |
| Credit Lyonnais | 7 1/2% | United Bank of Kuwait | 7 1/2% |
| The Cyprus Popular Bk. | 7 1/2% | Whiteway Ltd. | 7 1/2% |
| Duncan Lawrie | 7 1/2% | Williams & Glyn's | 7 1/2% |
| Equi Trust | 7 1/2% | Yorkshire Bank | 7 1/2% |
| English Trust | 7 1/2% | | |
| First Nat. Fin. Corp. | 7 1/2% | | |
| First Nat. Secs. Ltd. | 7 1/2% | | |
| Antony Gibbs | 7 1/2% | | |
| Greyhound Guaranty | 7 1/2% | | |
| Grindlays Bank | 7 1/2% | | |
| Guinness Mahon | 7 1/2% | | |

NOTES

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| 1 Royal Exchange Ave., London EC3V 3LU. Tel: 01-233 1101. | |
| Index Guide at 25th April 1978 (Base 100 at 14.1.77). | |
| Clive Fixed Interest Capital | 123.14 |
| Clive Fixed Interest Income | 115.57 |

